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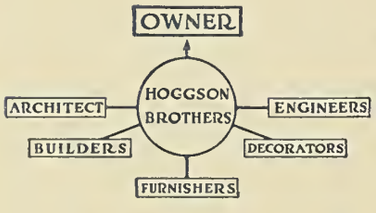
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A Devonshire Week

This article is a sprightly record of a week spent in coaching through Devonshire, England. It is more than a mere narrative, however, for the author is a woman of wonderful capacity for delineating types as well as places and her sense of humor makes her story a most enlivening narrative.

Through the Valley of the Rhone

The ancient Roman cities of the Rhone Valley are pictured with rare charm and fidelity in Mr. Douglas Sladen's article. The cities of Avignon, Le Puy, Arles and Nimes with their relics of Roman occupation and the more modern places such as Lyons and Marseilles are shown as fascinating objects for investigation.

The Devils of Notre Dame

Few people who have seen or read of the gargoyles which are among the most striking ornaments of the great cathedral of Notre Dame, realize their significance or appreciate their suggestion of humor. This article is an eye-opener in both these respects. It is both amusing and instructive.

Mexico, Our Nearest Southern Neighbor

Most of what has been written upon the subject of Mexico, the attractions and disadvantages of that country have been catalogued in rather unsatisfactory fashion. In this comparatively short article Mr. Arthur Page has done what many an author has failed to accomplish in a whole book—he has given the reader very nearly the impressions that he would receive were he to visit that country in person.

Constantinople

The capital of Turkey is an interesting but unclean place says the author of this fascinating paper. With its numerous mosques, its cosmopolitan population and its congested streets, it offers to the TRAVEL reader a most fertile field for study. To read this article is to get a very clear idea of conditions as they are in the Mohammedan city that was once dominated by Christian people.

In the Depths of the Everglades

One of the most interesting and novel features in the January TRAVEL is a thrilling description, by the celebrated writer on Florida, of a trip through the Everglades, the dark and dismal swamps which are all but inaccessible on account of the heavy undergrowth and poisonous reptiles which infest them. Mr. Dimock describes in a graphic manner this fascinating country and the people who live there.

A Government Chauffeur in the Philippines

When he heard the government was to establish an automobile stage line on the Benguet Road, the man who wrote this article applied for a position as chauffeur. He was both a gentleman and a competent driver and he got the job. His experience and the attitude of the natives toward the service together with very satisfying descriptions of the country along the road go to make up an article full of lively interest.

Eastern Cuba from the Saddle

The observation of a traveler by horseback to parts of the eastern end of Cuba where the railroads have not yet penetrated are included in this graphic and engaging article. The author tells a number of details concerning Cuban life, but he is reserved on the point of the garlic flavored meals which were served. He writes in an intimate and chatty manner and one feels on reading his work that he has had almost the equivalent of personal contact with what he saw.

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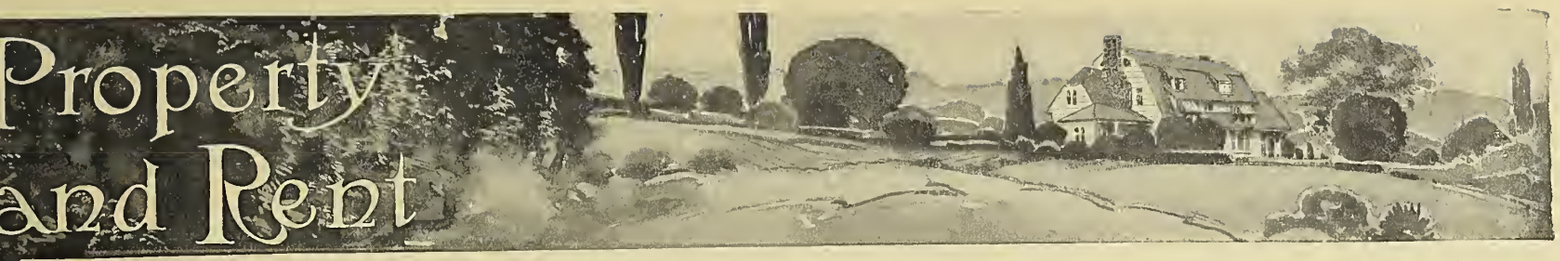
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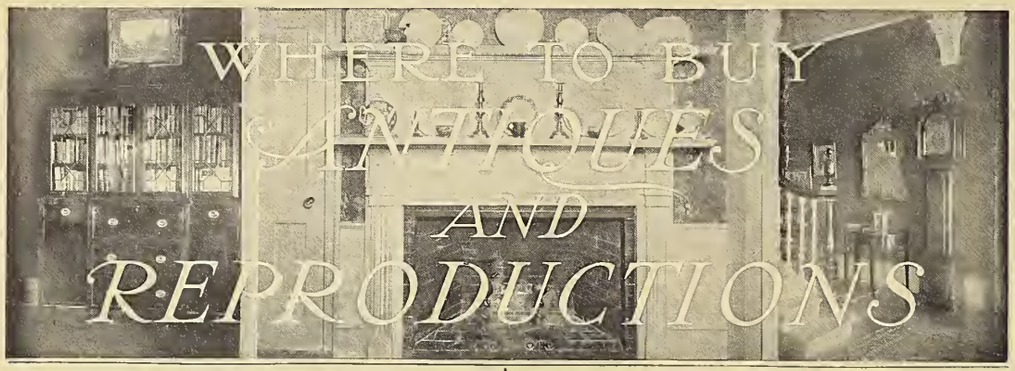
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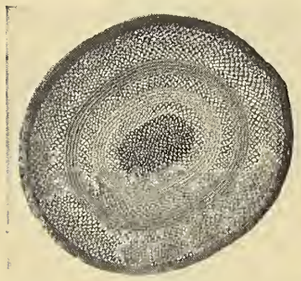


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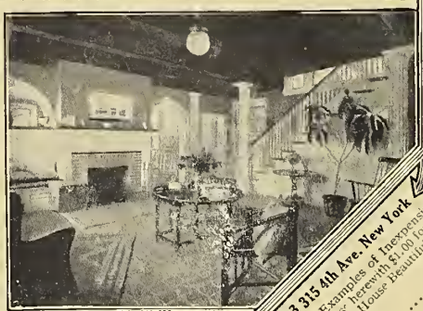
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Ex. Pres. Nat. Federation of Women's Clubs.



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Color in the Garden

WHILE variety of coloring is one of the most pleasing features connected with the blooming time of bulbs, this same amazing variety also leads to embarrassing complications in the garden, for it is among the bulbous plants that we find the brightest reds, the richest yellows, the clearest blues, the strongest purples, the most decided pinks, and the purest whites. Without very much effort one can plant a bulb bed in such fashion as to set all the teeth in the neighborhood on edge. Bulb beds, therefore, should be planted with some regard to color. You can safely mix yellows with whites and purples, for nature does that in the pansy. You may plant reds and yellows in the same bed with no very serious results, but cerise pinks and the blues that are really blue must be kept away from the yellows, reds, and purples.

The blossoms of a little bulbous plant called scilla siberica are the most intensely blue of any flower. In the chionodoxa we find various shades of this same blue. The puschkinia, too, though much paler than either of these, may be considered a blue flower. It is an excellent plan to group these attractive scillas, chionodoxas and puschkinias in a little bed with snowdrops and white crocuses. They must *never* be planted with purple crocuses, for they bloom at the same time, and the color combination is atrocious. One should avoid putting mixed hyacinths in this bed, too, since either purple or pink blossoms would destroy the pleasing effect of the blue and white. Both the scillas and the chionodoxas—the snowdrops and white crocuses—live from year to year and may be counted on to increase pleasantly if the soil is to their liking.

The tulip, more than any other one flower, lends itself with graciousness to the gardener's love of color schemes for tulips may be found in such an endless variety of color and shade that all tastes and needs can easily be satisfied.

F. H. SWEET

The Dog In Winter

WHEN the kennels are a permanent structure of the improved concrete construction they should be built with a south or southwestern exposure, allowing plenty of sunlight. Care should be taken that the bedding be kept clean and the house free from filth and refuse. Thorough cleaning should be made more frequently in winter than during the rest of the year as the dog keeps his kennel for a greater part of the time and consequently more dirt accumulates. It is often a good plan to sprinkle the floor with some good non-irritating disinfectant. The bed raised above the floor has the advantage of being cleaner and warmer than the one flush with the bottom of the kennel, and should be supplied with warm blankets or an old quilt or anything that can be aired and cleaned.

When the household has pets of the less robust breeds, or of short-haired varieties, the winter quarters are generally indoors—but even the more delicate Toy dogs should not be permanently kept inside. After good and regular feeding the prime requisite is exercise. Perhaps the ideal dog-room is one giving out on a runway or grass plot where the dog may take the air at will and not be subjected to too great a degree of temperature change. Beds made close to the stove or heater spoil the temper of the animal and make it extremely easy for him to catch cold. When you take the dog out it is a dangerous practice to take him on a lead directly from the warm room. He should be allowed to run about for a few minutes, if possible, as a stimulated circulation helps to resist chill. The more delicate breeds need some extra protection, which is quite unnecessary to the long-haired kind. It need not be considered an affectation to fit your pet with a winter coat. The best shops can provide you with a sane and serviceable sort which is far different from the monkey jackets sometimes seen. After bathing it is best not to let the dog out for several hours at least. See that he is well dried and rubbed. If there is a room permitting him to run about, so much the better.

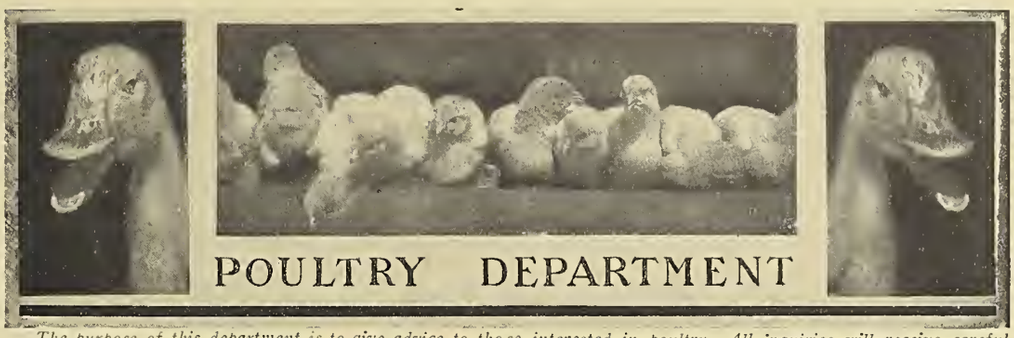
Poultry for the Suburbanite

TO meet the requirements of the man who wants an occasional roast or fricassee and a regular supply of eggs, such fowls must be chosen as combine good laying qualities with good weight.

As a rule those breeds which are most productive of eggs have light agile bodies, their activity preventing the acquisition of fat. The Leghorn breeds, Black Spanish, Minorca, etc., are of this class. The weighty breeds — Cochins, Brahmas, etc., produce fewer eggs. The breeds that combine weight and egg production to a profitable degree are the White and Barred Plymouth Rocks, Wyandottes and Rhode Island Reds, and these appeal to the small raiser as general utility fowls. While young they are good egg producers, and as they grow older take on flesh enough to fit them for their destiny—the table.

One consideration essential to a wise choice is the proposed environment of the birds. Whether upon high or low ground, confined or free, various breeds differ in their adaptability. The Rhode Island Reds, large framed and strong, are so vigorous as to render them free from the diseases which afflict other poultry under adverse conditions. This breed is favored by owners of low damp ground.

Generally, the breed that has held its own long in a particular locality is the best breed or strain for that locality. An examination of a number of flocks in a rural neighborhood will determine the dominant breeds — those which answer well the requirements of the thrifty farmer's wife as to endurance and profit.



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Though, for appearance' sake, thoroughbreds are desirable, yet a cross of good breeds is just as successful. The Plymouth Rock with the Brahma will give excellent weight, and if the eggs of good layers are chosen, the cross should result in fine general-purpose fowls. White Wyandotte and Plymouth Rock, and Brahma and White Wyandotte are excellent crosses. Wyandotte or Plymouth Rocks may be bred with Leghorn for increased egg production of the medium-sized fowls, but the progeny must subsequently be bred for weight by selecting the heavier bodies with the best egg productiveness.

There is no distinct advantage derived from crossing fowls of very unlike characteristics as, for instance, the heavyweight Cochins of moderate laying qualities, with a lightweight profuse layer like the Leghorn. The amateur breeder who would emphasize certain characteristics in his flock should choose fowls that have those characteristics to a certain extent, and seek to strengthen them by a union with breeds in which those characteristics predominate.

Having decided the question of breed, the prospective raiser must procure his eggs or poultry from a strain of fowls whose members do not bear too close relation to one another. In spite of blood, inbreeding will produce poor layers and irregular sitters with chicks deficient in vitality. There must be proper balance of traits with best of health in the old birds so that the chicks may have their right heritage of vitality. Cockerels might better be changed every second year to insure this. They must not be sires to the third generation nor should cockerels of the second generation be mates of fowls of the preceding generation. Inbreeding emphasizes inherent weakness in the progeny, and though such fowls may be thoroughbreds, in that their blood is distinct, yet they will be constitutionally weak.

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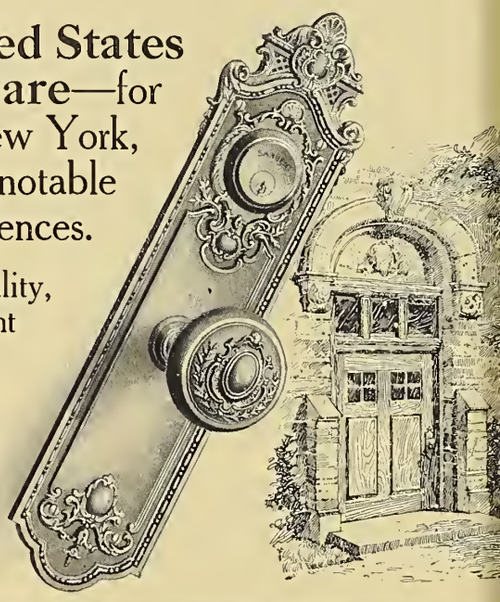
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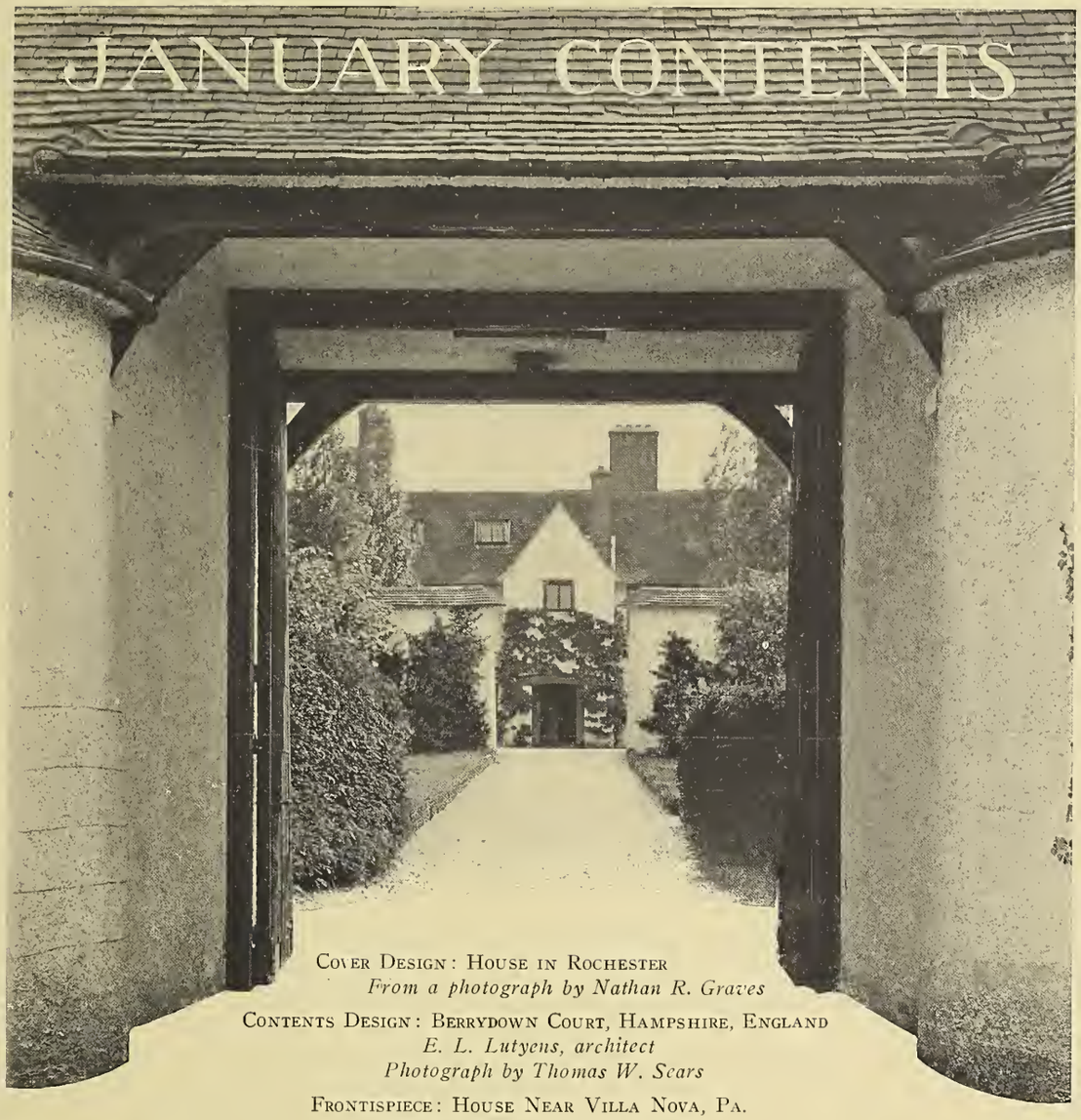
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VOLUME XIX

NUMBER 1

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A COUNTRY HOME NEAR VILLA NOVA, PA. CHARLES BARTON KEEN, ARCHITECT

Although the house contains a large amount of space in the third story, the apparent height of the building is kept low by bringing the roof down at this steep angle to a point just over the second story windows. The absence of dormers contributes greatly to the satisfying appearance of the mass

House & Garden

VOLUME XIX January, 1911 NUMBER 1



An objection sometimes heard regarding the fireproof house is that it is too plain to be attractive. The Holden house, at South Orange, N. J.—Hollingsworth & Bragdon, architects, shows that this is by no means a necessary fault

The Fireproof House

THE REVOLUTION IN BUILDING MATERIALS THAT HAS COME ABOUT WITHIN THE LAST TWENTY YEARS—COMPARATIVE COSTS OF UNBURNABLE CONSTRUCTION AND ITS ADVANTAGES

BY JARED STUYVESANT

Photographs by Henry A. Frost, A. E. Sproul, Thomas W. Sears and others

IN the early years of home-building in America, the natural and almost only available material was wood. Our forefathers could scarcely afford the time and labor necessary in building their homes of stone; brick kilns were few and far between; and these three materials completed the list. Wood was so common, so easily worked and so close at hand that its use followed as a matter of course.

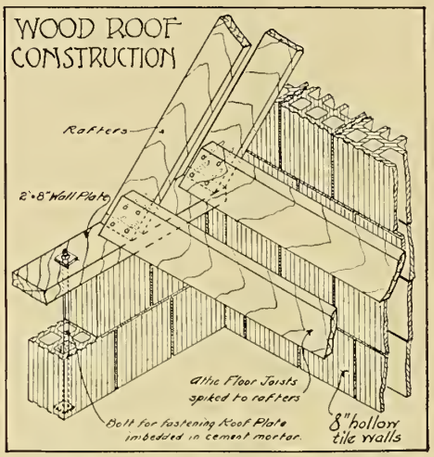
It has taken many years for our home-builders to get away from the idea that wood is the most economical form of construction. Even now, although the cost of wood has increased by leaps and bounds within the last decade, the cost of a house built of clapboards or shingles is less in most localities than a house of any other material. But we are coming to the realization that there is something more to be considered than merely this first cost.

With the enormous waste by fire—a loss so great in figures as to be beyond our comprehension—and the need for buildings that will not require so much in the way of maintenance cost, other materials have been brought forward and have rapidly found their way into general use.

Within the past five years the examples that we see on every hand of fireproof construction in office buildings and commercial structures of various kinds has developed a widespread desire to build our homes in a similarly indestructible manner. There has been also another factor that has brought fireproof construction within the bounds of possibility for the small place. This is the constantly increasing familiarity on the part of the building trades with the methods and materials used in fireproof construction. Ten years ago the cost of a fireproof house was out of all reach,



A pleasing variety of color and texture has been secured by inlaying tile on the uprights of the porch railing. The home of Mr. P. A. Tomes in Woodmere, L. I. Alfred Hopkins, architect



Wood rafters and floor joists, with a roof of tile or slate, give a good measure of protection with the fireproof walls



A welcome return to the high-columned Colonial porch. The Martin House, Cynwyd, Pa. McIlvaine & Roberts, architect



A particularly successful surface treatment of colored tiles and marble panels set in stucco. Mann & MacNeille, architects

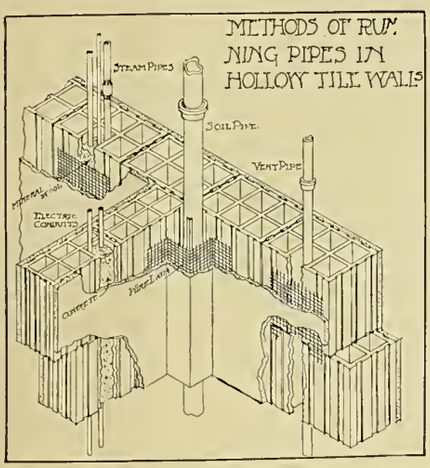
because the contractors would have been so much afraid that their workmen could not handle the unfamiliar materials in an economical way. Fortunately, the more pressing need for fireproof construction in commercial buildings has paved the way and has paid the preliminary high price of this knowledge, so that to-day the small suburban or country home built of concrete or of hollow tile is as common a sight as a new building of wood.

There are several ways in which a house may be built to withstand fire. One of these is the monolithic cement construction. In this the walls are first built up as hollow forms with lumber, and into these the concrete is tamped in successive layers. This method has already been practically abandoned for the reason that it is an expensive one and results in a wall that is apt to allow moisture to come through. Another method is the use of concrete blocks. Here the cost is very much less than in the monolithic system, but unfortunately the concrete block industry received a very black eye because the material, instead of standing on its own merits, attempted to imitate stone and failed. There is no doubt that this method would be in far more common use if someone had never thought of the familiar "rock-face" pattern for these blocks. The third method is the use of hollow terra cotta tile in several forms. These blocks are laid up very much in the same way that bricks are laid, and by reason of the rapidity of erection, the fire-resisting quality of burned clay and the succession of dead-air spaces secured in the wall itself, the method has pushed its way into widespread use. It is familiar as the most common form of construction in office buildings.

In the first method preferably, and in the third method necessarily, the wall is covered on the outside with stucco. The sub-



A special form of block is made for the window jambs to bring the wall out to an even edge



With the exception of the soil pipe, the plumbing and heating pipes and the wires may be run in the vertical channels formed in the tile



An English scheme for embellishing the surface of a stucco wall is to cover it with a network of wires on small iron posts, not unlike heavy iron nails, on which the vines are trained

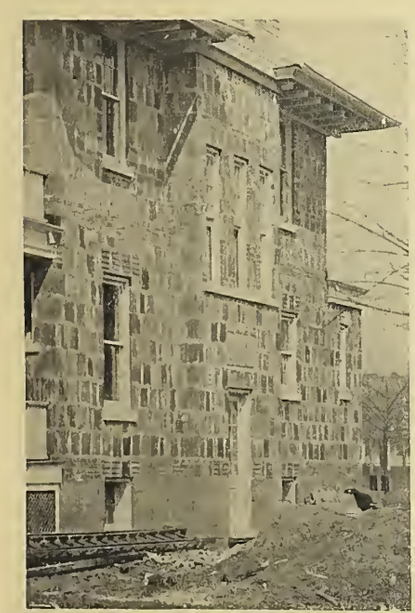
ject of this exterior treatment is a large one in itself and one that has been taken up in this magazine some months ago, so that it is perhaps unnecessary to go very deeply into the matter here. It might be mentioned, however, that the hollow terra cotta blocks are grooved so as to give a "key" for the stucco which, of course, is applied directly to the terra cotta surface. Usually the stucco work is put on in two coats, and it is well to remember that the tile should be thoroughly wet before applying the first coat. This latter will be at least one-half inch thick outside of the tile surface, and will consist of one part Portland cement, three parts of sand, with a "guaging" of not more than 10 per cent. of lime putty. This first coat should be applied under pressure to give it a good grip on the tile, and it should be well scratched before it sets. The finish coat will be one-quarter inch thick, and, for a plain cement finish, will consist of one part cement and two parts sand. It is possible, of course, to vary this finish coat both in color and in surface texture, but this is beyond the scope of the present article.



Shingles have been used here for the roof, doubled every fourth course, but tile or slate are more common in the fireproof type

The question is frequently asked: "What sort of foundation is necessary for this tile construction?" It is possible to use a foundation of any material that will serve for the ordinary frame or brick building. The choice of a foundation material depends usually on what material is most readily available in that particular locality. It is possible, and may be more economical, however, to use for the foundation these same hollow terra cotta blocks in the size that is made for that purpose—12 x 12 x 12 inches. The bonding at the corners is secured by starting each course with a block six inches wide.

Above the foundation the walls are usually laid with 8 x 12 x 12 blocks with the holes running ver-



The hollow tile wall ready for the stucco finish. A facing of brick is also used occasionally



Where stucco is used with other materials there is usually too great contrast, rather than the restraint manifested here





It is interesting to compare the appearance of the modern fireproof house with the intermediary type between wood construction and the former. In the illustration at the right the lower part is of tile and stucco, but the upper portion retains all the characteristics of wood construction. With fireproof walls the roof has naturally grown simpler and less conspicuous



Hollow tile and stucco, roofed with slate, costs about 15 per cent more than a good wood house. Squires & Wynkoop, architects



The use of fireproof materials has brought about a simpler mass and less fussy detail in our country homes

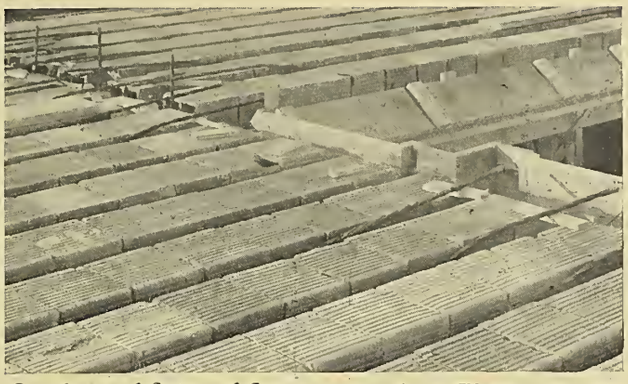




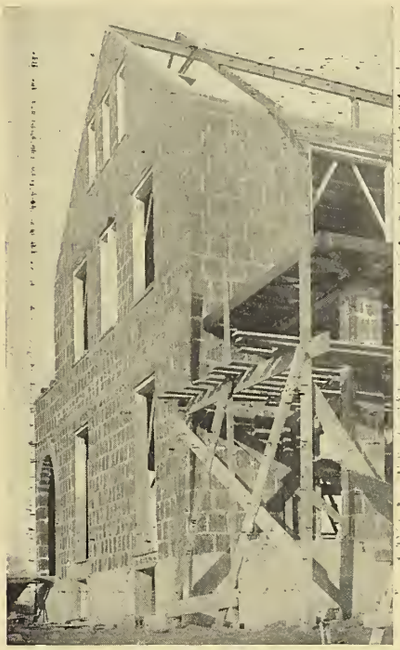
Two fireproof houses at Ivy Court, Orange, N. J. Mann & MacNeille, architects. A flat type of roofing tile was used in one of the houses, with variegated slate in the other



The interior of a hollow terra cotta house, showing a concrete arch resting on the block partition



One form of fireproof floor construction. The terra cotta blocks are held up by a temporary support, with spaces between the rows. In these are laid reinforcing bars, over which is poured concrete. The finished floor on top of this may be of tile or of wood



Ready for the roof, which, in this case, is to be of terra cotta blocks held by steel angle beams

tically. There is a greater strength in the blocks laid this way than if the openings are horizontal. With this size there is no special corner block required, as there is a natural bond formed four inches in width. In addition to these simple hollow terra cotta blocks, there are several patterns made under various patents under which the idea has been to gain greater solidity and strength by different methods of interlocking the adjacent tiles.

At the window and door openings, special sizes are needed to bring the wall out to an even edge, and an additional improvement in the forms made for this purpose is a projecting lip which covers the outside edge of the window-box and prevents dampness from working through at the point between the woodwork and the terra cotta wall. For the lintels, it has been a common practice until recently to support the ordinary blocks on an iron beam or in some other convenient way. Now, however, a special form of flat arch is made, and this is self-supporting. The sills of the windows and doors are formed by laying 4 x 12 x 12 inch tiles flatwise, with a small inclination to shed water. These are finished with cement.

One of the diagrams reproduced herewith shows the methods of running pipes and electrical wires in the walls. It is only for the four-inch soil pipe — the drain pipe of the plumbing system — that a projection from the wall surface is necessary. This is usually run in a corner and covered by wire lath and plaster to a square edge. The smaller pipes are easily run through the vertical openings of the blocks, which are chipped away where necessary for that purpose.

Another common question that the home-builder asks is this: "Is is necessary or advisable to have fireproof floors and a fireproof roof in addition to the walls?" The answer depends upon the individual needs and also upon the willingness on the part of the owner to devote an additional amount to the cost of the building for the sake of additional protection. The fireproof floor is desirable where the contents of a house are unusually valuable and where they need the fullest protection. The man, for example, who has a valuable collection of paintings would be willing to pay the additional cost of fireproof floors, and perhaps even of a fireproof roof, in order to reduce the danger of loss to the minimum.

Ordinarily, however, the owner of the moderate size home will be content with wooden floors on wooden joists, depending upon the fireproof character of the walls to prevent any serious damage from fire. These floor joists rest with a four-inch bearing on the top of a course of the wall blocks and are protected on the outside by a four-inch tile facing. The details of construction where wooden roof rafters are used is shown in the diagram on page 12. Where it is found advisable to have the floors strictly fireproof, the common method is to build a temporary support on which are laid the tiles with the openings horizontal, and with four-inch spaces between the rows (see the center illus-

(*Continued on page 56*)

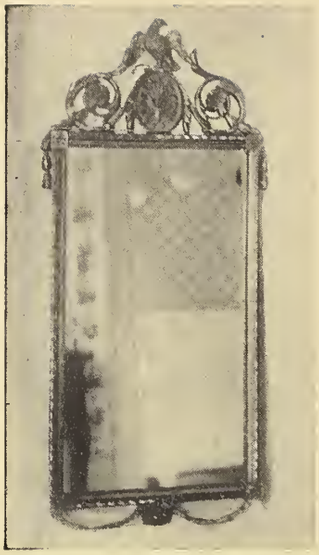
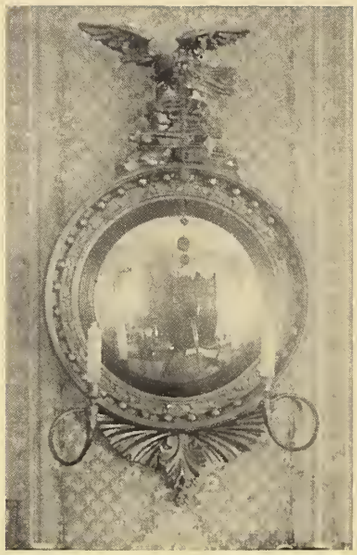
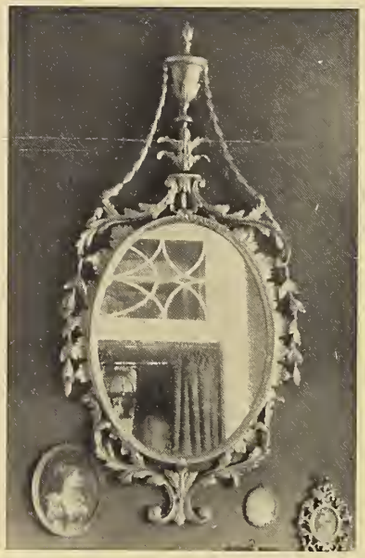


A Long Island house where half-timber work and brick paneling lend color to the stucco walls. Aymar Embury, II., architect



Where the design will permit a flat roof, this is made fireproof at a lower cost than a sloping one

COOPER UNION


A group of old mirrors that indicate the extent to which refined furniture design was carried during the Georgian Period in England—the time of the great cabinet-makers

What the Period Styles Really Are

IV. THE GEORGIAN PERIOD IN ENGLISH FURNITURE MAKING, DIVIDED INTO THE FOUR PARTS BEARING THE NAMES OF CHIPPENDALE, ADAM, HEPPLEWHITE AND SHERATON

BY LUCY ABBOT THROOP

[*Modern usage of furniture and fittings for the interiors of American homes would seem to indicate that we have but two available and distinct styles—"Colonial" and Craftsman or so-called "Mission." For a long time the historic period styles were so ignorantly and tastelessly employed as to bring about a revulsion of feeling and their almost complete abandonment. There are signs that the pendulum is swinging back again now, and that a really sincere appreciation of the best that has been done in the past will reveal new possibilities for beauty in the homes of to-day. Miss Throop's series of articles will aim to give an understanding of the period styles and how they may be intelligently used.*—EDITOR.]

THE classification of furniture in England is on a different basis from that of France, as the rulers of England were not such patrons of art as were the French kings. Flemish, Dutch and French influences all helped to form the taste of the people. The Jacobean period lasted from the time of James I to the time of William and Mary. William brought with him from Holland the strong Dutch feeling that had a tremendous influence on the history of English furniture, and during Anne's short reign we see the same Dutch feeling slowly changing into what is called the Georgian period. This Georgian period covers the reigns of the four Georges and is divided into several parts, better known as the times of Chippendale, Adam, Hepplewhite and Sheraton. French influence is marked throughout and is divided into parts. The period of Chippendale was contemporaneous with that of Louis XV, and the second part included the other three men and corresponded with the time of Louis XVI. It was not



A chair from early in the 18th Century of the Dutch type



One of the Chippendale patterns, dating from about 1750



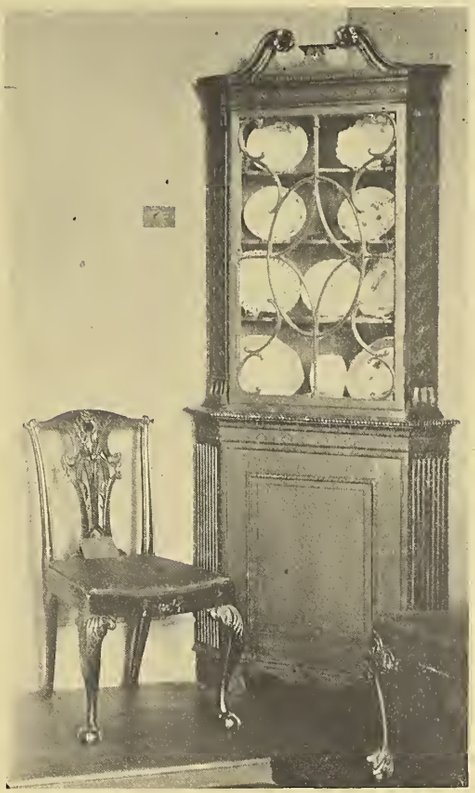
The characteristic shield-back chair of Hepplewhite



Thomas Sheraton's rectangular type of chair-back



A sturdy corner chair of the Chippendale period



By courtesy of the Metropolitan Museum of Art

A particularly graceful corner-cupboard and chair of the Chippendale school



A Chippendale armchair dating probably from 1750-1770

until the latter part of Chippendale's life that he gave up his love of rococo curves and scrolls, dripping water effects, and his Chinese and Gothic styles. His early chairs had a Dutch feeling, and it is often only by ornamentaton that one can date them.

The top of the Dutch chair had a flowing curve, the splat was first solid and plain, then carved, and later pierced in geometrical designs; then came the curves that were used so much by Chippendale. The carving consisted of swags and pendants of fruit and flowers, shells, acanthus leaves, scrolls, eagle's heads, carved in relief on the surface.

Dutch chairs were usually of walnut and some of the late ones were of mahogany. Mahogany was not used to any extent before 1720, but at that time it began to be imported in large quantities, and its lightness and the ease with which it could be worked made it appropriate for the lighter style of furniture then coming into vogue. Chippendale began to make chairs with the curved top that is so characteristic of his work. The splat back was always used, in spite of the French, and its treatment is one of the most interesting things in the history of English furniture. It gave scope for great originality. Although, as I have said before, foreign influence was strong, the ideas were adapted and worked out by the great cabinet makers of the Georgian period with a vigor and beauty that made a distinct English style, and often went far, far ahead of the originals.

The genius of Chippendale justly puts him in the front rank of cabinet-makers and his influence was the foundation of much of the fine work done by many others during the 18th century. He used very little inlay; and carving, good proportions and good joinery seem to have interested him more than the beauty of the wood itself. He is often criticized for his excessive rococo taste as displayed in the plates of the "Gentleman's and Cabinet-maker's Director," and in some of his finished work. Many of the designs in the "Director" were probably never carried out, and some of them were probably added to by the soaring imaginations of the engraver. This is true of all the books published by the great cabinet-makers, and it always seems more fair to have their reputations rest on their finished work that has come down to us.

Chippendale, of course, must bear the chief part of the charge of over-elaboration, and he frankly says that he thinks "much enrichment is necessary." He copied Meissonier's designs and had a great love for gilding, but the display of rococo taste is not all in his work by any means. He early used the ogee curve and cabriole leg, the knees of which he carved with cartouches and leaves or other designs. The front rail of the chair also was often carved. In about 1760 or 1765 he began to use the straight leg for his chairs. The different shapes of splats will often help in deciding the dates of their making. The curves shown in the diagram on another page are the merest suggestions of the outline of the splat, and they were carved most beautifully in many different designs. Ribbon-back chairs are dated about 1755 and show the adapted French influence. His Gothic and Chinese designs were made about 1760-1770. Ladder-back chairs nearly always had straight legs, either plain or with double ogee curve and bead moldings, but there are a few examples of ladder-back and cabriole legs combined, although these are very rare. The chair settees of the Dutch time, with backs having the appearance of chairs side by side, were also made by Chippendale. "Love seats" were small settees. It was naively said that "they were too large for one and too small for two." A large armchair that shows a decided difference in the manners of the early 18th century and the present day was called the "drunkard's chair."

Lacquer was used a great



A Sheraton desk with rolling doors and characteristic oval handles

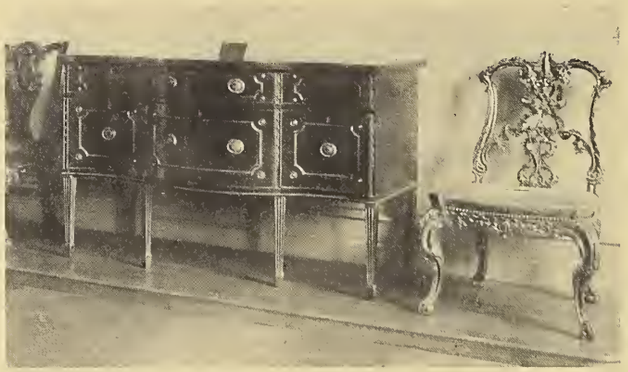


To Hepplewhite is due credit for the introduction of the urn-shaped knife-boxes



By courtesy of Metropolitan Museum of Art

An inlaid marble mantel by the architect and furniture designer, Robert Adam



By courtesy of the Metropolitan Museum of Art

The sideboard is by Shearer, the first maker of a serpentine pattern. Chippendale's elaborate ribbon-back chair shows a strong French influence



A card-table dating from the first half of the 18th Century, showing the wells for money and the corner candle stands

deal in the Dutch period and when the demand became so great that China and Japan could not supply it, the English themselves did very beautiful lacquer work.

Between 1710 and 1730, when the craze for "Indian work" was at its height, there were many pieces of old oak and walnut furniture covered with lacquer to bring it up to the fashionable standard, but their forms were not suitable, and oak especially, with its coarse grain, did not lend itself to the process. The stands for lacquer cabinets vary in style, but were often gilded in late Louis XIV and Louis XV style. The difference between true lacquer and its imitations is hard to explain. The true was made by repeated coats of varnish, each rubbed down and allowed to become hard before the next was put on. This gave a hard, cool, smooth surface with no stickiness. Modern work, done with paint and French varnish, has not this delightful feeling, but is nearly always clammy to the touch, and the colors are hurt by the process of polishing. Chippendale did not use much lacquer, but in the "Director" he often says such and such designs would be suitable for it.

This craze for lacquer, during William's, Anne's and George I's time, was accompanied by the craze for Chinese porcelain. Especially in Queen Anne's reign, it was put everywhere—over mantels, tables, cabinets, cupboards—all of them loaded with it.

Much of the other furniture that Chippendale made was heavy, but the best of it had much beauty. His delicate fretwork tea-tables are a delight, with their fretwork cupboards and carving. He seemed to combine many sides in his artistic temperament, a fact that many people lay to his power of assimilating the work of others.

Robert Adam, the chief member of the firm of Adam Brothers, came to London in 1758. He at once became one of the great architects of the day, and his influence cannot be overestimated. Having been in Italy, he brought back a love of classic simplicity and helped to put an end to the taste for rococo decoration that was gaining ground. Chippendale had some influence on this early work, but Adam's own individuality soon asserted itself, and we have the result in the beautiful style called by his name. As the Adams cared only to design furniture, some one else had to carry out the designs, and it is said that Chippendale worked for them. We at least know that they had a great influence on his work, and his last period was marked again by a greater simplicity of treatment.

The early furniture of Adam was plain and the walls were treated with much decoration that was classic in feeling. After 1770 he simplified his walls and elaborated his furniture designs until they met in a beautiful and graceful harmony. He designed furniture to suit the room it was in, and with the dainty and charming coloring, the beauty of proportion and the charm of the wall decoration, the scheme had great beauty.

He used the ram's head, wreaths, honeysuckle, mythological subjects, lozenge-shaped, oval and octagonal panels, and many others. He was one of the first to use the French idea of decorating furniture with painting and porcelain placques, and the furniture itself was simple and beautiful in line. The stucco ceilings designed by the brothers were picked out with delicate colors. They did not make many chairs, for they did not care to, nor did they possess the mechanical knowledge necessary, but

(*Continued on page 52*)





An interesting comparison of two old sofas, the one on the left with the cabriole legs used so frequently by Chippendale, the other with the slender tapering legs inlaid with the bellflower ornament of Hepplewhite





Door knockers of three types from old Colonial homes. Many reproductions of patterns such as these are now obtainable in various finishes, while an old one may still be picked up occasionally

Some Hardware Suggestions

THE IMPORTANCE OF HAVING FINISH HARDWARE THAT WILL MATCH IN STYLE AND CHARACTER THE LIGHTING FIXTURES AND OTHER FURNISHINGS—THE AVAILABLE MATERIAL

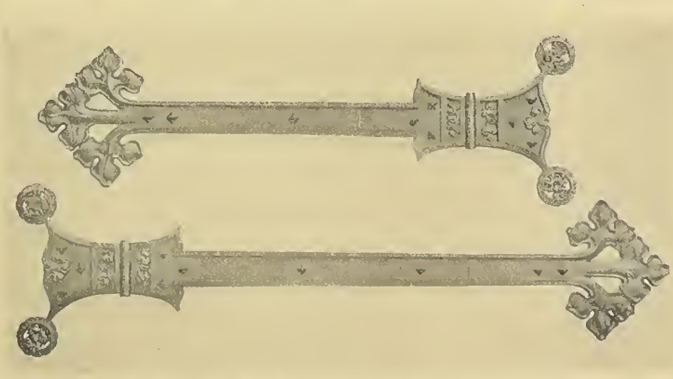
BY CARLETON MONROE WINSLOW

Photographs by T. E. Marr and others

ON a recent visit to New England the writer had occasion to spend some hours in a smoking-car on the ancient Knox and Lincoln division of the Maine Central Railroad. Local daily papers and the favorite authors eventually proved dull, and an examination of the interior of the car was instituted to see what might prove of interest. The interior wood finish was bad enough, but what held the attention was the hardware and other metal work with which the car was "trimmed." The character and design of this hardware is too well known to need much description here. Made of cast iron, its surface covered with crude, queer, "Oriental" design and washed with a thin coat of bronze plating, it was typical of the hardware which was in vogue about the year 1870, and immensely suggestive of the great advance made both in design and construction of hardware since those days.

Interest in both bad and good hardware being stimulated, the writer upon arrival at his destination, looked about for other examples. The Victorian era revealed itself in "Gothic" hardware, hardly better than the "Oriental" variety mentioned above, an epitome of everything to be avoided. Other unpleasant or rather unpleasing examples were the black and white door knobs and "Eastlake" varieties—shamelessly cheap. Mixed with this was some of a more modern but still commonplace kind, of better quality but having no "style" nor relation to its environment. It was just ordinary, and showed lack of desire, effort or possibility of getting something better.

The foregoing has been mentioned to show the state of affairs that exists where the home-builder pays little or no attention to the finish hardware of his house. Such hardware is still manufactured, offered for sale and frequently selected by the carpenter and sometimes the owner, for houses where better conditions might prevail if the owner would only realize that the hardware, while a subordinate element in the construction of his home, is by no means an unimportant one. In these days there is no reason why the finish hardware should not be appropriate and harmonize in style and character with the house and its other fittings, such as the lighting fixtures and furniture. Things have improved since 1870. The Centennial Exhibition gave a won-



Strap hinges in a Gothic pattern that show the true spirit of the style. Suitable for any of the English types of houses

derful stimulus to design in stock hardware, and the advance since has been steady and upward, until to-day the variety of styles, finishes and cost presented is almost limitless. The more important manufacturers have show-rooms in the larger cities and splendidly illustrated catalogues for the use of those who can not come in person. Where the services of a competent architect have not been obtained the selection can be made by mail. A carefully made list of articles needed, sent to the salesrooms, together with some idea of the style of the house and rooms, quality desired and expense permitted, will bring back a list and estimate. Greater harmony can be obtained by sending a sample of the finish of the lighting fixtures, if these have been procured, and having the hardware finished to match, for every conceivable variety of metal and color can easily be made.

If you are building a Colonial house the hardware should conform. If you have a good architect, undoubtedly he will look after it, but it may be necessary for you, the owner, to select the hardware. Note the chief characteristics of the exterior of your house. It may be heavy and strong; it may be more delicate in feeling. Choose accordingly. For your dining-room you may have some good mahogany furniture fitted with hardware of its period. Harmony and interest can be obtained by selecting hardware of the same type. You may have a mantel designed in the styles of the Brothers Adam—or have a liking for the delicate character of work done in their time. Let it be the keynote for the finish of a room. Have the hardware and lighting fixtures harmonize both in form and color.

For a house of Elizabethan character, the variety of stock hardware to choose from is large. The flat unmodeled surfaces



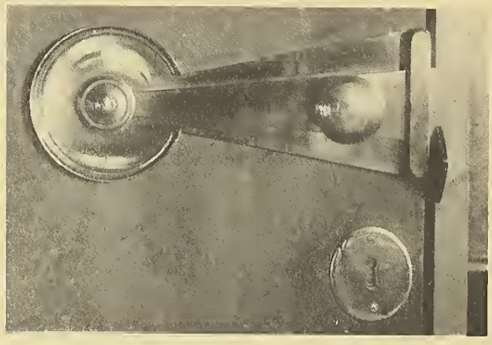
There are modern reproductions of the old rim-locks of Colonial days that could lend character to a modern home in that style



An old door knocker and a modern one of the same type



A closet hinge cut by Mr. Maxfield Parrish from a common strap hinge of brass—a practical suggestion for the amateur craftsman





Two more examples of Mr. Parrish's skill in securing distinctive effects with simple materials. The small hinges are merely cut out of the common stock hinge

with symmetrically disposed ornament, interlacing bands, volutes and guilloches, small studs and bosses, lend themselves well to hardware design. Admirable stock patterns are shown.

For a building, house or room in any of the French styles the variety of patterns to select from is the most extensive of all. The French have always been clever designers and craftsmen in hardware, and many of their patterns have been copied or followed by American makers. Yet much of the French type is bad, or at best insipid and weak. Selection should be made very carefully.

Good stock hardware of the Gothic type is more difficult to find. Obviously, it would be absurd, generally speaking, to copy slavishly the huge rim-locks and other articles so magnificently executed in mediæval Germany and France. Our modern lock is of a different pattern and generally of the mortice variety. The cylinder lock and the paracentric key have been the great factors in working the change and, for the largest and strongest locks, the visible part consists of the plate or escutcheon which can be made of almost any shape to suit the fancy of the designer or the style desired. So generally the plate is merely decorated with ornament of the chosen style and the object is then supposed to be Gothic or Louis XVI, as the case may be. The result is not altogether satisfactory, for the ornamentation is not functional and exists merely for its own sake.

Beautiful hinges and corner plates, ring handles and pulls, door knockers, nail heads and other articles are usually obtainable in stock patterns; but where good examples cannot be found it is better to use hardware of the plainest, simplest type, which is always appropriate and of which you will not easily tire.

Schools of ornament represented in



A curious old combination of ring handles and lock escutcheon found in a Colonial home



In spite of the cusping and reproduction of detail this is not true Gothic

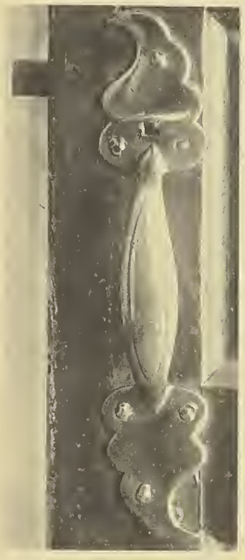
stock hardware are the Renaissance, Gothic, Italian, Spanish, early French, German and English; the Empire, the Romanesque (whose modern vogue is now almost entirely gone), Greek, Moorish, Persian, Indian and even the Japanese and l'Art Nouveau.

Although the point should be obvious to everyone, too much insistance cannot be put upon the fact of having only the best locks obtainable for the outside doors of a house. Ordinarily those of the interior are of minor importance. It has been demonstrated that there is no pattern of lock in the world which cannot be picked, but the locks made by one of the best manufacturers show an interchange of once only in 27,000 times, which safeguards the door very well. This, of course, is the cylinder lock; the old tumbler lock showing only one out of 35 changes at the most. For the inside door fastenings, old-fashioned rim locks and thumb latches are picturesque and appropriate in many cases and certainly add an old-time charm to a room. Chain door-fasteners, casement and transom adjusters, sash locks, door stops and the like, commonplace as they are, can be greatly improved in appearance by having them finished in the same style as the articles adjacent and at only a small increase in cost.

For the man or woman who loves order, a key cabinet saves annoyance caused by losing keys. It ought to be about the size of the ordinary house medicine cabinet and about as deep—the duplicate keys of the house hanging in rows, neatly tagged, and the door fastened with a good lock.

Still another practical suggestion is to have drawers and cupboards properly marked. Small brass card holders are inexpensive, and when filled with cards neatly labeled, save a large amount of opening and shutting drawers and doors.

In conclusion, I would impress upon the home-builder's mind the fact that the architect considers artistic hardware an important item in the success of the house. During the infancy of modern stock hardware a number of prominent American architects did much to advance its development; one says: "Its present great development and vogue are due above all to the sympathetic and cordial appreciation of the profession in every section of the country, the practice of which tends steadily to give increased prominence to hardware as an important detail of interior decoration, and to devote increasing care to its intelligent adaptation to its environment." Do not minimize its importance. Let hardware have artistic interest coupled with its commonplace utility.



An old thumb-latch and handle secured by hand-wrought nails

Lighting Fixtures of Character

THE TREND OF MODERN DESIGNS AND THE PASSING OF GAS EQUIPMENT—SOME PRACTICAL SUGGESTIONS FOR A CHOICE OF FIXTURES AND THEIR LOCATIONS

BY KATHARINE NEWBOLD BIRDSALL

So firm a hold has electricity on the problem of lighting that practically none of the houses under construction nowadays are fitted with gas pipes and fixtures. There is, of course, the connection for cooking, and oftentimes gas is used throughout the kitchen domain. Now that the economy of electricity is assured by many saving devices, and the current in many sections of the country costs no more than gas, it is safe to say that use of gas for house lighting is on the decline.

And with the wholesale advent of electricity, comes a desire to entirely abolish the ugly, incongruous fixtures with their quirls and twists and characterless forms, and to provide for each room of the house dignified and artistic fixtures which will either suit the style of the period in which the room is to be furnished; or which are of so general and simple a style that they will fit in with furnishings of any character, be they early English, French, Italian, or Colonial. The combination gas and electric fixtures which are generally in use now are no longer made in the best and most desired designs, for where a new house is wired for electricity, the cost of gas piping throughout may be eliminated.

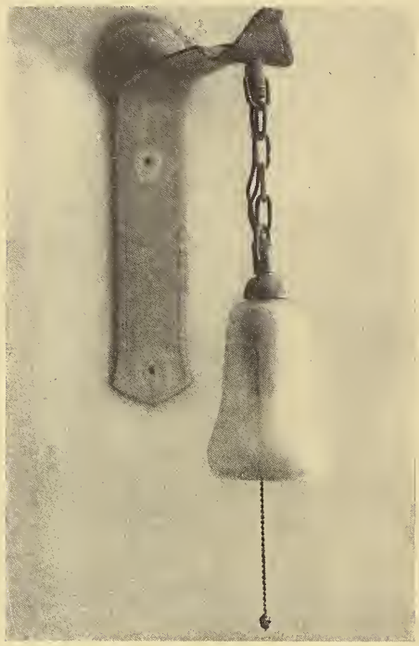


The low dome-light for over the dining-table is being superseded by the high-hung fixture or by an abundance of side-wall brackets

It is an erroneous idea that an old house cannot be effectively wired for electricity without tearing out flooring and walls, and generally upsetting the equanimity of the household. If one desires to exchange the old way for the new, and to replace the out-of-date gas fixtures with more modern, convenient and artistic electric fixtures, one should consult a good electrician. Work well done at first will more than repay the little additional expense it may require to secure the best services.

The matter of buying fixtures for the house is one which is seldom well considered until the building expenses have been pretty well fixed; and it is always more or less of a shock to find that good style fixtures add a considerable sum to the already planned expenditures.

In selecting fixtures it is well to remember that one is choosing them for years to come. Wall papers may be changed frequently, but a change of fixtures is rare, mainly because of the expense.



A simple and attractive one-light bracket finished in greenish bronze



The French brackets are well designed as a rule and cost from $7 to $300



Based on the Colonial whale-oil lamp of our forefathers

The ideal fixture is one which combines character with mechanical convenience. In striving for the artistic we are sometimes apt to neglect the practical purpose of evenly diffusing the light so that the eye shall be pleased as well as supplied with the proper amount of illumination of the most economical kind. A room too brightly lighted is perhaps worse than one too dim. In the one some of the lights may be turned off, but the effect is apt to be scrappy and shadowy; while the darkness of the room too dimly lighted may be remedied by a portable lamp.

In selecting the fixtures, one should be careful to purchase from a reliable concern, whose designers make a study of architecture and decoration as well as of the lighting problem; and to beware of those which bear too close a relationship to the "commercial." Although a great many of the fixtures which we often see in public buildings and in stores are attractive in themselves, they are unsuited to house decoration. Many of the commercial fixtures and the cheaper and more old-fashioned grade of house fixtures bear a strong resemblance to the ugly gas fixtures of the last decade.

The day of the center low hanging chandelier is passing, except in the case of very large rooms, in which a great deal of light is desired. It is a cause for thankfulness, as far as the dining-room and living-room are concerned, for with a low-hanging light one is constrained to have the table always in the same position; and it is impossible to utilize the rooms for dancing, or other evening entertainment, without first reckoning with the hanging light or being apt to suffer from it. If central lights are needed or desired, they are now fixed close to the ceiling, the distance therefrom being regulated by the height of the room and length of fixture. The ideal lighting for dining-room consists of double side brackets placed so that the light is evenly diffused over the entire room; and as candles are used on the table there is no need for other center illumination.

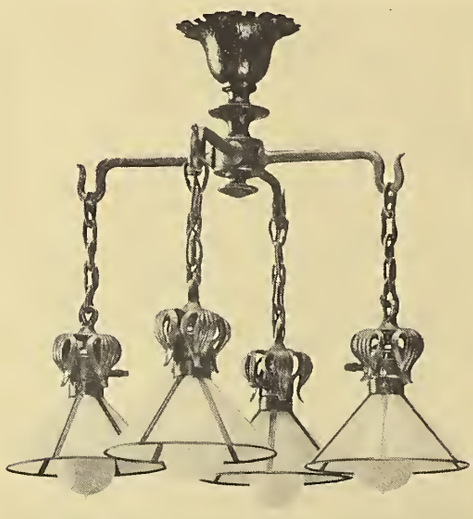


A porch lantern, the sides of which are made up of thick puddled glass

Ceilings of to-day are usually from nine to eleven feet high. In placing side brackets it is well to remember that they should be from 5ft. 6 ins. to 5 ft. 8 ins. above the floor if they are to diffuse the light, and at least 7 ft. high if they direct the light toward the floor, else there will be disagreeable shadows.

Side brackets are also a very desirable and attractive addition to the living-room; the center light being supplied by a large portable table lamp. In a long living-room which needs considerable illumination, a ceiling group light or rosette, is very satisfactory. In wiring it is well to plan for sufficient bracket outlets, so that adequate light may be secured, no matter what the coloring of walls and hangings. Dark woodwork and paper "eat up" the light, while white and light colors serve to reflect.

A type of fixture which covers an extremely wide field of usefulness has a suggestion of the early French influence in the deco-



An English type which is worth about $45 in natural or smoked brass, or green bronze



A good English bracket for a library. The cylinders are of mica

ration, but is more old English in form. This may be used in all rooms, and is in as good taste in the bedroom as in the living-room or dining-room. The design shown is one of the very few that can with good taste be used in this general way, no matter what the style of architecture or furnishings.

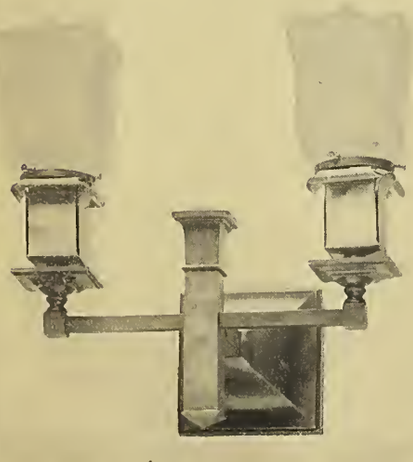
The Colonial fixtures modeled after old English lamps are appropriate for the Colonial living-room and the more important rooms of the house. The graceful curves follow the quaint lines of the Colonial whale-oil lamps, which were made with bronze or glass bowl.

The severe English type is suited to any style of home room, but is especially satisfactory with old English decorations, where the dark wood paneled walls give such a feeling of simple elegance. Old Flemish fixtures are also used to splendid advantage in an old-style English room.



In planning your lighting equipment do not forget a distinctive porch lantern

There are more crystal drops used in fixtures designed for Louis XVI rooms than for any other period; they are used ten times in French rooms to once in any other style. The crystals give a beautiful prismatic radiance which can be secured in no other way. Candle fixtures, too, are distinctly French, and unsuited to a room furnished in heavy styles. They are permissible, however, with Italian furnishings, and especially in the Colonial silver finish. These fixtures are most unusual, and come in old Sheffield forms adapted to the uses of today, from $7 to $300 each for single brackets. Where the surrounding decorations predominate in the Italian style of design, carved wooden fixtures are also freely used. The prices vary little from the metal, except in the case of elaborate carvings. The wooden fixtures are usually heavily gilt. The French, as well as the Italian, admits of the heavily carved mirror between two candle fixtures, the whole covered with antique gilding. In speaking of candle lights, it is well to remember that they provide only about one-half the illumination produced by the ordinary electric lamp and bracket of common size and candle power.



A simple and adequate bracket that may be bought for about $12

It is extremely hazardous to give even a suggestion of the cost of fixtures, as there are so many peculiarities to be met with, and the range of price is almost infinite. A single wall fixture of character cannot be secured for less than $6, while double brackets cost a third more, and the price varies for different styles up to $300. Brass, which is in most general use, is perhaps most reasonable. Then comes bronze with its various finishes and the Colonial silver, and gold-plated types heading the list.

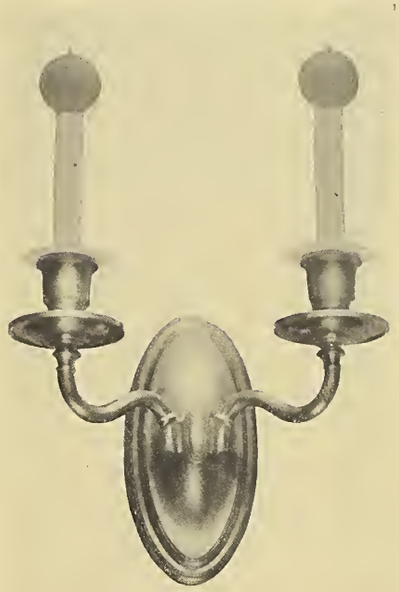
While considering cost it is well to remember that in out-of-the-way places or rooms seldom seen there is a chance to economize and save the lighting appropriation for the most frequented parts of the house. The pantry and kitchen, for instance, may be furnished with a drop cord, or the bulb may be screwed direct to the wall socket.

The location of fixtures is by no means an unimportant detail, and one in which it is well to employ expert advice from competent sources.

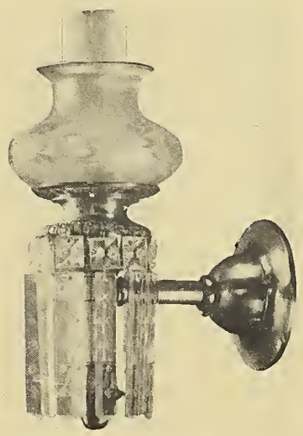
(*Continued on page 52*)



Carved wood brackets finished in dull gilt are competing with brass



If candle brackets are used remember that they give very little light



An adaptation of a Colonial lamp pattern with prisms



Prism fixtures are suitable for many rooms and give a play of light in the pendants



A modern kitchen with all the luxuries—tile floor and side-walls, open plumbing and a built-in range



The large center work-table with a non-absorbent top is coming to be an important feature



You can have a pivoted flour barrel closed in under the dresser shelf

KITCHENS OLD AND NEW



The kitchen of our great-grandmother's day—less sanitary, less convenient probably, but how full of blessed memories and the glamour of long ago!



A rival of the kitchen closet shelf, in keeping with pure food laws

AND THEIR SUGGESTIONS



For the summer home. There is a good suggestion in the table space under the draining-board



Where beauty has not been confined to the front of the house. The untensil hook-rack is worth copying

The Problem of the Bathroom

THE DEVELOPMENT OF THIS MOST IMPORTANT FACTOR IN THE COMFORT OF A HOME—TYPICAL AND LUXURIOUS ARRANGEMENTS OF PLAN AND FIXTURES

BY A. RAYMOND ELLIS

Photographs by M. H. Northend, the author, and others

ONLY a few years ago, sanitary conveniences, which were very crude when compared with those of to-day, were considered luxuries; to-day they are necessities, demanded for our physical comfort and welfare. The old-fashioned Saturday tubbing was a much dreaded and messy event; but with sanitary house plumbing bathing became a pleasure and a valuable adjunct to good health. It is, therefore, interesting to note the various treatments of the present bathroom.

The average house to-day contains at least two bathrooms, the simplest equipment being a water-closet, lavatory and tub, the two latter fixtures supplied with hot and cold water supply pipes. From these three fixtures of the simplest kind, installed in a room not smaller than 5 ft. 6 in x 6 ft. 6 in., we may enlarge the scheme to contain a shower-bath, with floor receptor to catch the water, a sitz or foot-bath, double lavatories, if for the owner's bath, with marble or porcelain pier slabs for toilet articles. These fixtures may be simple in pattern, of enameled iron or of porcelain or marble, in a room having tile or marble floors and wainscot. There are, happily, inexpensive fixtures of good quality that are just as efficient as the most expensive ones, and the plainer the lines of the fixtures the more beautiful they will appear in the finished bath; heavy ornamentation in color or molded design should be avoided—it is not so easily kept clean, nor is it so beautiful.

In many houses having but one servant, a separate bath is provided for her use, and in a house costing $8,000, it is customary to provide a private bath connecting with the owner's chamber, as well as a general bath for the family and guests, and a servants' bath in the attic. The importance the bath and sanitary plumbing has attained is shown by the fact that seven or eight per cent of the cost of a house is taken for plumbing, and in houses costing from $8,000 to $15,000, three bathrooms are installed. The treatment of each varies.



A bathroom wherein little more than the necessary space has been given. The fixtures for such a bathroom cost about $500, but it is possible to secure a durable and attractive equipment of three fixtures for less than $100

The model servants' bath should have a floor of small hexagonal white, unglazed tile with hard plastered walls, above a sanitary base, painted with four coats of moisture-resisting paint and equipped with a five-foot enameled iron tub, quiet syphon-jet closet, with oak seat and tank, and a plain pattern enameled iron lavatory. A medicine closet should be built in the wall over it, having a mirror set in the door. The fixtures cannot be properly set in an area less than 5 ft. 6 in. x 6 ft. 6 in., and 5 ft. 6 in. x 7 ft. 6 in. would be much better.

The owner's bath is largely a matter of personal taste and cost. Usually this has a floor of 2 in. white, unglazed hexagonal tile, with a 4 x 6 in. white glazed tile for walls, with cap and sanitary base, marble thresholds and plinth blocks. The height of the wainscot is optional; but 4 ft. 6 in. is usual, with the walls and ceilings above it oil painted. The room should not be smaller than 8 ft. x 10 ft. and may open from the owner's chamber or dressing-room. Its equipment usually comprises two lavatories of vitreous china, placed at least six inches apart, unless a double lavatory is used in one slab, over

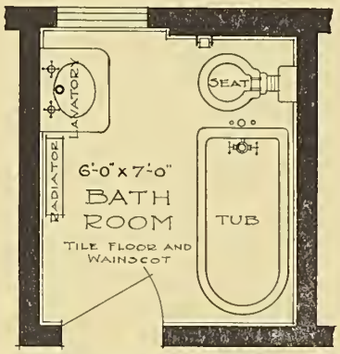


Where the tile used for wainscoting has been employed also to encase the tub—a sanitary arrangement

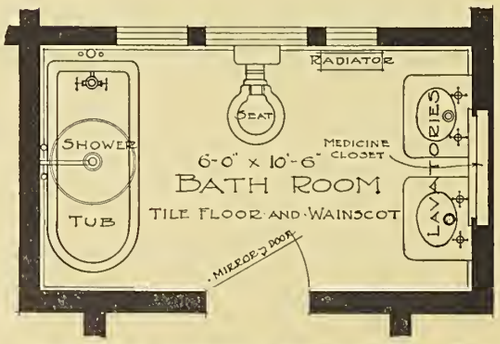


A shower arranged over the tub, with a linen duck curtain, is almost a necessity if one cannot afford a separate enclosure for it. A plan of this room is shown below, at the right

which may be a medicine closet built into the wall with mirror door set in; the bathroom door should have a full-length mirror. In the illustration at the bottom of the page is shown a silent syphon-jet closet with low-down tank finished in mahogany. The "low-down combinations," as they are called, are made in oak, cherry, mahogany and white enamel. The tub should be at least 5 ft. long, of enameled iron or porcelain, finished on both sides if enameled, and supported on porcelain block feet, with standing waste and mixing cocks. The tub must be set far enough from the wall to permit cleaning back of it—very often a difficult task.



A space 6 x 7 ft. is almost the minimum that will accommodate three fiixtures



Plan of the bathroom shown below. Two lavatories are sometimes provided for the owner's private bath

Every fitting or exposed pipe in the bathroom should be nickel-plated. The shower may be installed over the tub, as in one of the illustrations, or made a separate fixture with a floor receptor to drain off the water. It may be enclosed with a cotton duck curtain, which is more agreeable to the body than rubber or marble slabs. The merits of each fixture and its equipment I shall leave to the reader, because these things he can readily determine for himself; but the arrangements and number of fixtures required must be considered—the quality is a matter of price. The general bathroom of a house should be similar to the owner's—in some cases it is divided into two compartments, as shown in a plan on the next page, with the water-closet by itself—permitting independent use.



The modern "low-down" tank has almost entirely displaced the old-fashioned sort near the ceiling

In homes costing from $15,000 up, the number of bathrooms is in proportion to the number of occupants. Every room may have a connecting bath with tile floor and wainscot, completely equipped—in such a case the visit of a guest is not fraught with hasty skirmishes to the nearest bath, perhaps only to retreat, and wait and listen for an opportunity to use it.

Plumbing fixtures are made in many materials; the most popular of these, on account of durability and cost, is cast iron with an enamel glaze fused on the iron. This ware will stand hard usage, is not easily fractured, does not craze and therefore holds its color. The vitreous china ware is, I think, more appropriate for bathrooms finished in tile, because the materials, being similar, are in harmony, while the enameled iron is not quite as heavy or substantial looking when used with tile. Vitreous china is potter's clay, properly fired, with a vitreous glaze baked on; porcelain is similar and their cost is about the same, except that this increases rapidly with the larger pieces; because fewer perfect fixtures are obtained. Fixtures cut from solid marble block are the most expensive and their relative merit with relation to cost is a question for the owner to determine.

There is little difference between the enameled iron, vitreous china and porcelain or marble as far as the retention of heat is concerned, or the feeling from bodily contact. There are in every kiln some fixtures that are not quite perfect; they are called "seconds," and catalogued as "Class B" goods, with a lower price.

The weight of massive plumbing in a frame dwelling is considerable and will cause a settlement of the floors unless carefully supported.

The fashions in tubs are many. The usual shape is square at the foot and round at the head—at the foot are the waste and supply pipes which are made in several combinations. The double bath cock, which gives hot or cold water or a mixture of both, is advisable for tubs—the small cup between the faucets is a ring tray and can be replaced with a soap dish if desired. Most shower-baths have a shampoo attachment or body spray that can be used instead of the overhead shower, so that the head and hair is kept dry if desired, and if a shower is not going to be installed this attachment can be provided for in the tub.

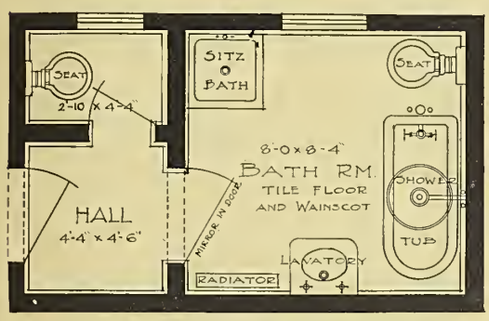
A tub encased in tile is a per-

fectly sanitary treatment, and in some cases the tub has been sunk into the floor a foot and then incased to avoid the high step necessary to get into the tub. The plunge—sunk in the floor—is an unusual treatment that permits more freedom of movement than the tub; but the tile, when wet, is slippery, and I should expect one might carelessly slip in with fatal results. Roman tubs are alike at each end—with fixtures in the middle of one side of the rim. Solid porcelain tubs rest on the floor, set into the tile. The ideal position for the tub, if there is available room, is with the foot against a wall and ample room on either side to get in or out of it. Tubs are made in lengths ranging from 4 feet to 6 feet, and about 30 inches in width over rims.

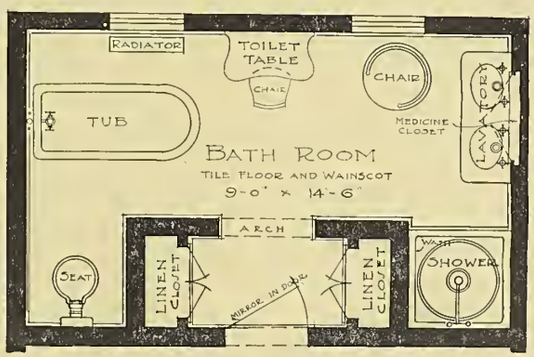
The lavatory is an important fixture that is made in a great many varieties. The old-fashioned bowl is obsolete—the oval has taken its place, though probably the best is the kidney-shaped bowl, as it permits a free and natural movement of the arms in raising water to lave the face. The bowl should be at least 14 x 17 in., in a slab 22 x 32, with a space surrounding the bowl countersunk a little to form a border that tends to confine the splashed water. All the fixtures manufactured by responsible concerns



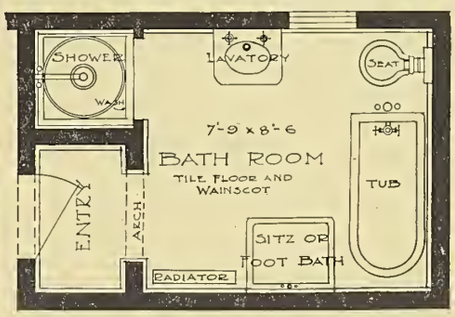
The sunken bath is a luxury beyond the majority of us. A low ceiling is necessary in the room below to allow for the sinkage, and this is frequently difficult to arrange



For the hall bathroom it is desirable to provide a separate enclosure for the closet wherein this is possible, so that the two may be used independently



In a house where the space may be spared here is a luxurious plan for the owner's bath adjoining his bedroom



A typical plan for the general bathroom, wherein are found a sitz bath and a separate shower besides the regular fixtures

are equipped with nickelplated faucets, wastes, traps and supplies that are very satisfactory; but quite often the plumber who installs the work buys the fixtures without the selected trimmings and substitutes a cheaper pattern. Some tubs and lavatories are sold in "A" and "B" qualities, and it will be to your advantage to select the fixtures with your architect, who knows the grades and fittings.

A particularly pleasing treatment is the bath opening from the owner's chamber, and separated from it by glass partition. This arrangement is good where outside light cannot be afforded or obtained, and a curtain effectively screens it.

Bathroom accessories should be arranged with care and consist of the following devices: plate-glass shelves supported on nickelplated brackets are the best, and as they do not get hard usage, are not often broken; towel-racks; glass and toothbrush holders; clothes-brush hangers; clothes



An effective private bath adjoining a bedroom, from which the former is lighted

hooks; soap dishes; soiled towel baskets and hardware are usually of nickelplated tubing screwed into the tilework. The accompanying photographs and plans will illustrate the subject further and are self-explanatory.

The question is frequently asked: "What can I do with the old-fashioned plumbing in my home? Is it possible and not unduly expensive to have the old fixtures replaced by new ones of the modern types?" It is a very easy matter, comparatively speaking, to tear out the old wood-cased tub, water closet, and boxed-in basin and to set in their places fixtures of the "open" style. Probably there will have to be some patching of wall plaster and floor boards, but a better way out of this difficulty is to put in a tile wainscot and lay a new floor of hard wood, or tile, or even linoleum, over the old. In many old-fashioned bathrooms there is a high wood wainscot, which, if treated with white enamel paint, will serve excellently well in place of tiles.



A street in Hampstead, one of the model garden suburbs. There is a feature worth copying in the use of a heavy iron chain, covered with vines, between the white fence posts



An important factor in the picturesque quality of English cottages is the fact that the builders were willing to sacrifice light and air upstairs for the sake of unbroken roof masses



An interesting treatment of an entrance door and stairway woodwork. B. Parker and R. Unwin, architects



One can imagine the cheeriness of rooms having these projecting bays all of leaded glass casements



The English architects are not afraid to design special doors and wood-trim that give character



It must be conceded that much of the charm in the English cottages is due to the mellowing influences of nature



A pleasing variety of materials and a carefully studied assymetry in design are common characteristics of English homes

SUGGESTIONS FROM ENGLISH COUNTRY HOUSES



For the front of a small suburban plot one expects closely cropped, neatly edged lawn, but for the country place incessant puttering is not only unnecessary—it does not give the most pleasing result. Set the house in a grove of trees and shrubbery, and let the grass grow

A Setting for the Country Home

HOW IT SHOULD DIFFER FROM THE SMOOTH SHAVEN LAWN OF THE SUBURBAN LOT—THE VALUE AND DESIRABILITY OF NATIVE TREES AND SHRUBS

BY E. P. POWELL

Photograph by C. H. Claudy

NO matter how small your homestead may be, it can afford a beautiful setting. This does not mean an elaborate display of trimmed evergreens and rare and costly trees, it means an inexpensive and generous supply of trees and shrubs, that will give shade, blossoms, grass and sometimes fruit. An American lawn can best be made of American trees—and it does not exclude fruit trees. The old aristocratic idea that fruit trees were out of place among ornamental trees has passed away, as it is recognized that they can be made ornamental as well as profitable features.

Lawns are of three sorts: for shrubs, constituting what is called a shrubbery; for trees, whether a grove, or a botanic garden, or simply a frontage; and for playgrounds. When you have only an acre or two, it is best to classify your lawns as shrubbery and playgrounds united; with the house set in a grove. If economy of space still cramps you, let the grove come down to a few commanding trees of perfect proportions; while the shrubbery may flank the house, or partly surround it.

But in all cases be careful about a muddle or medley of all sorts of trees and shrubs and flowers without any apparent relation to each other. This is the chief trouble with our American homesteads; they have no distinctiveness of purpose as to detail, and no unity of the whole plan. Many of them convey no idea whatever, but are a succession of efforts to crowd in as much of the useful and beautiful as possible. The owner of half an acre crowds his stuff a little closer than the owner of an acre, but he means to get just as much. Fancy or rare trees are planted pell-mell with our common oaks, maples and elms. If the question were asked of the owner, "What really are you trying to express by this plantation?" he would be surprised. He has never thought of anything except to get a lot of pretty things, and squeeze them in, anywhere and everywhere. Tree agents presuade him to buy, and whatever is bought must find room. As likely as not, he has three or four cut-leaved weeping birches in a row, or a line of evergreens. Not a tree, shrub, flower-bed or fountain bears a rational relation to anything else.

After a unified and consistent plan for a country home, the next aim should be inexpensiveness. Our country homes have generally nothing but a little frontage of grass, run over with a lawn-mower once a week—a mean conception and a small achievement. Such a lawn, utterly useless from the esthetic as well as from the useful standpoint, costs more in the course of the year than a noble grove and a quarter acre of most beautiful shrubs. But this preference of lawn to grove is not our worst failure. Many of our wealthy people have a notion that a country home consists in something that must incessantly be puttered over by half a dozen men. The owner only pays the bills. This is not really living in the country. The secret of success is to get a place in order; then *hold* it in order by personal superintendence. But do not undertake a lot of haberdashery, and mistake it for gardening.

In selecting material for an average country lawn, we can, and should, confine ourselves largely to native shrubs and trees. These must not be despised because they are common. I have never seen any section of the United States where, within a few miles of his homestead, the resident could not secure a good collection of beautiful trees. Certainly this is true in most of the

house, regular coursed ashlar of native stone was used, while the Atlantic coast and Pacific States, as well as in a large part of the Prairie States. Within easy reach of my present home, I can find wild cherries, haws, nuts, Judas trees, euonymus, barberry, viburnums and elders; and, among the evergreens, hemlocks, pines and arbor vitæ.

This list scarcely touches the beautiful things that Nature has scattered along our creeks and in our glens, such as the soft maple. These trees are curiously broken up into varieties, and one of the most superbly variegated sorts is the swamp maple which grows wherever there is a moist dell. If young specimens are selected they do admirably well on our lawns. This is true also of our native elms, which grow in such profusion that there is ample opportunity to select those that are specially adapted to your needs. Besides this, the Kentucky coffee tree can easily be secured, and anywhere in the Northern States it proves hardy. The female grows very upright, while the male tree is exactly the opposite, with its broad spreading and weeping limbs bearing spicy flowers in June. The native persimmon is hardy as far north as Canada, and makes one of the most beautiful small lawn trees. My purpose is not to suggest, by any means, a complete list, but to draw attention to the fact that our most common and overlooked trees and shrubs are most beautiful on the lawn.

Somewhere about our older settlements there is sure to be a large variety of naturalized foreign shrubs and trees. Among the most common that I find are English and Russian barberries, Tartarian honeysuckles and mock oranges in great variety; while the Siberian maple has already begun to sow itself somewhat freely. Occasionally a very choice and rare evergreen may be found by a little hunting in the wild glens, and the pastures will always reveal something very interesting to transfer to your home. Cross-breeds grown in shrubbery soon scatter seed, and start new sorts. Winds and birds contribute to multiply these, and carry them over the country.

A delightful lawn may consist wholly, or almost wholly, of fruit trees. An apple grove is both ornamental and a source of pleasure. In it the house may be placed appropriately and economically; but this requires discretion in the selection of sorts that grow without too much sprawling. Apple trees need not grow in rows, in order to bear well. In former times the Indians grew them in great groves, of fifteen hundred trees. Pear trees are peculiarly well fitted for tree lawns, and the dwarf varieties for shrubberies. There is hardly anything more beautiful than a cherry tree, either in blossom or in fruit. This is true not only of the round-headed, sour varieties, but of the tall and superb sweet varieties, like Rockport, Bigareau, Windsor and Gov. Wood. The Northern Spy also makes a capital lawn tree, if care is taken about its branching. The Astrachan, with its load of scarlet fruit, bears earlier, but I like late sorts better for lawns. In arranging the lawn it is well to mingle fruit trees of an erect-growing sort, like the Buffum pear tree, with evergreens. *Magnolia acuminata* is hardy everywhere, and is a native. Its shaft, straight as an arrow, carries superb foliage. The tulip tree is also native, and our lindens can be found everywhere from Maine to Florida. For a quiet homestead you may even confine your planting to half a dozen trees like lindens, maples, butternuts and white ash. A linden grove constitutes just the place for a few hives of bees. This tree, in common vocabulary the basswood, is one of the finest trees in the world for lawns, for groves or on street sides.

The shrubbery, I have said, should, if possible, be a plot by itself, and associated with your drives. I have already named a few of our common native sorts. Add to these altheas and hydrangeas for late blooming, and then never omit those varieties which only make their beauty known in latest autumn or in winter. One special object is to plant our lawns so that they can be made to brighten our homes during the coldest weather. For winter beauty and warmth of color be sure to have barberries, and plenty of the high-bush cranberries, and the red-barked dogwoods. This last has fiery red bark all winter, which turns green in spring. Near the house, and serving as a windbreak, should be an abundance of mountain ash. This tree takes but little room, and is loaded with bird food. I should never consider a country

(*Continued on page* 52)

The Best Trees for the Central West

BY FRANK C. PELLETT

Photographs by the author

IN riding across the States of Illinois, Iowa or Nebraska, on any of the great railroad lines, one must be impressed with the evident poverty of trees. In a section where the rural population is the richest in the world, the farmhouses, in many cases, are set upon a bleak plain, with no protection from the cutting northwest winds that sweep across the prairie in winter. Neither is there shade to shelter the live-stock from the piercing heat of the summer sun. Most of the older homesteads are surrounded with a small grove of such quick-growing trees as cottonwood, willow or soft maple. The man, starting his home upon the prairies, who looked ahead and dreamed of fine shade trees, windbreaks and woodlots, was the exception and not the rule. The few that have realized such dreams, however, show magnificent possibilities in that direction. There is no single element that will contribute so much to the beauty and value of a homestead as an appropriate setting of trees.



An Iowa farm home that is an exception to the rule; few of them have the setting of fine old trees

REWARDS OF TREE PLANTING

Here and there a farm home is to be found, whose owner realized the value of trees, and who, after a generation spent in one spot, has developed something of value aside from the cash income from the farm. The pictures illustrating this article were all taken on one farm. The owner, it will at once be seen, has planted hundreds of forest trees, and now, after nearly forty years, is surrounded by specimens as



The American elm is the one rapid-growing tree of long life suited to all conditions. A ten-year-old specimen furnishes good shade

fine as those about the boyhood home in the East.

BARE WESTERN CITIES

Not only is the country short of desirable trees, but the cities and towns as well. While there are many fine trees in the cities of the Middle West, that have been planted within the past fifteen or twenty years, most of the trees that line the streets are of such sorts as soft maple and box elder. The writer has noticed many streets during the past few months, in Chicago, Lincoln, Des Moines and Omaha, on which hardly a really fine tree was to be seen. It is fortunate, however, that the plantings now being made are for the most part better suited to the purpose.

SHELTER TREES

The first need to be met by the settler on the Western prairie was a shelter from the high winds, and naturally something that would serve the purpose as quickly as possible was selected. As a result most of the groves are composed of rapid-growing trees. Instead of making a shelter-belt of red cedar, which is almost as impenetrable as a stone wall, the pioneer chose willow, which could be started from cuttings without expense beyond the labor of planting. An accompanying photograph shows a cedar windbreak about twenty years old, that makes several degrees difference in the temperature of the barnyard to the south of it.

SHADE TREES

For shade, the American elm is best suited to all situations. There is one on the old homestead whose top is seventy-five feet in diameter, and whose trunk is about ten feet in circumference. If given plenty of room it makes magnificent shade, and is as well suited to conditions in the Mississippi valley as to the Eastern States. The black walnut is another fine shade tree, although of rather slow growth. When grown as specimen trees they are very symmetrical. Being a little difficult to transplant, a good way to start them is by planting a few nuts where the trees are wanted, removing all but one when the trees are well started. Hard maple is another fine tree which is being generally planted as a street tree in the cities, and has demonstrated its success in the rural districts as well.



A group of red cedars, twenty years old. There is no finer tree for the construction of a windbreak to shield the barn lot or the early garden

UTILITY TREES

To supply fuel and fence-posts the hardy catalpa is the best tree for this section. It grows rapidly and has lasting qualities that are lacking in other rapid-growing woods. As a shade tree it is not very desirable, although the abundance of showy flowers are attractive for a time in spring. For the woodlot the catalpa has no equal. Some that I have seen planted in the spring of 1904 are now six or seven inches in diameter and twenty or more feet high.



The black walnut is a shapely tree when given room to develop. It has no superior for shade, though its leaves appear late and fall early

TREES FOR ORNAMENT

If I were to plant trees for shade or for ornament, then, I should plant elm, black walnut and sugar maple, all fine trees that should live for centuries; for shelter, red cedar, white and Austrian pine, with about ninety per cent. red cedar. On the above mentioned farm, where perhaps a hundred fine cedars are growing, only one of an equal number of spruce, planted under the same conditions, has survived. For wood, posts, poles and other utilitarian purposes, I would plant catalpa only, and all the time. This is not a very formidable list, but a desirable one for Iowa conditions. Other trees that thrive here have no qualities for use about the farmhouse proper not possessed by those named—many of them are lacking in some essential that would make them available or advantageous in meeting the conditions of Western life.

FOR THE PASTURE

It is fitting, however, to mention a phase of tree planting that is an attraction and advantage to the business of the farm—that is, trees for the pasture land. Although the willow may not be of value about the house itself, it has its place beside the pasture pool. Quick growing and of no expense to plant, it soon gives grateful shade to the grazing animals, protecting them during the hot summer months. Twigs simply stuck into the moist soil take root in no time and produce hardy trees. The black willow (*Salix nigra*) is a good type to plant for this purpose. Where the farm borders a river of crumbling mud banks or shifting sands, the sand-bar willow renders good service in holding up the banks and keeping a body of drift in place that would be moved by spring floods and unusual tides.



A modern Colonial house of clapboards on Long Island. With the exception of the gambrel roof this is a fairly representative example of the New England Colonial type. J. Acker Hayes, architect



The home of Mr. J. L. Baily, Ardmore, Pa., Baily & Bassett, arch tects. A dignified stone house of what might be called t Pennsylvania Colonial type. Its prototype was much simpler



It seems rather strange that so few houses built of cement are in the Italian style, which, by reason of its flat wall surfaces, is well adapted to that material. Louis Boynton, architect



A California home that is based on the Swiss chalet. This style, with its deeply overhanging roof and wood construction, is well adapted to warm climates. Myron Hunt and Elmer Grey, architects



The Norwegi America. It Catskills it s ous. Georg



The English half-timber house as usually built in this country is merely a plaster house covered with wooden strips in a pattern. Here, however, the timbers are a structural part of the wall. Oswald C. Hering, architect



There is something about the Spanish Mission type of house, w the brilliant coloring of its tile roof that makes it appear alm out of place in any location other than a flat, unshaded plain



excellent example of the Dutch Colonial, examples of which
ype are found throughout Northern New Jersey and occasionally
n Long Island. The central enlarged dormer is an unusual detail



The Southern Colonial house of the original type is almost always distinguished by its high-columned porch, nearly surrounding the house and shading the windows. Occasionally the porch has a second story, as here



rarely found in
's studio in the
ularly harmoni-
architect



One sees brick houses built in almost every style, but that material always seems most at home in a house of the Tudor type. Usually the gable ends are of a simpler form without the curves



The architects practising around Chicago may well lay claim to having developed a new type of architecture, based on no scholastic precedent. Horizontal lines predominate



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The French chateau type, while as distinctly marked as any of the others, is, of course, suited only to the mansion on a great formal estate or for adaptation to the needs of a city house

NTED BY EXAMPLES FROM BOTH NEW AND OLD BUILDINGS



A modern Colonial house of clapboards on Long Island. With the exception of the gambrel roof this is a fairly representative example of the New England Colonial type. J. Acker Hayes, architect



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An excellent example of the Dutch Colonial, examples of which type are found throughout Northern New Jersey and occasionally on Long Island. The central enlarged dormer is an unusual detail



The Southern Colonial house of the original type is almost always distinguished by its high-columned porch, nearly surrounding the house and shading the windows. Occasionally the porch has a second story, as here



It seems rather strange that so few houses built of cement are in the Italian style, which, by reason of its flat wall surfaces, is well adapted to that material. Louis Boynton, architect



A California home that is based on the Swiss chalet. This style, with its deeply overhanging roof and wood construction, is well adapted to warm climates. Myron Hunt and Elmer Grey, architects



The Norwegian type is rarely found in America. In this artist's studio in the Catskills it seems particularly harmonious. George A. Reid, architect



One sees brick houses built in almost every style, but that material always seems most at home in a house of the Tudor type. Usually the gable ends are of a simpler form without the curves



The architects practising around Chicago may well lay claim to having developed a new type of architecture, based on no scholastic precedent. Horizontal lines predominate



The English half-timber house as usually built in this country is merely a plaster house covered with wooden strips in a pattern. Here, however, the timbers are a structural part of the wall. Oswald C. Hering, architect



There is something about the Spanish Mission type of house, with the brilliant coloring of its tile roof that makes it appear almost out of place in any location other than a flat, unshaded plain



California, more than any other state, has been developing a bungalow type. The mild climate and abundance of good wood have been important factors in bringing it into wide use



The French chateau type, while as distinctly marked as any of the others, is, of course, suited only to the mansion on a great formal estate or for adaptation to the needs of a city house

VARIOUS ARCHITECTURAL TYPES OF COUNTRY HOMES AS REPRESENTED BY EXAMPLES FROM BOTH NEW AND OLD BUILDINGS



A bit of detail from the University of Virginia, designed by Thomas Jefferson, and strongly influenced by the robust scale of stone-work in France



A classic stone fragment. The egg-and-dart molding appears at the top, with the bead-and-reel and a dentil course below it, the latter badly broken

The Real Meaning and Use of Architectural Detail

I. COLONIAL WORK—ITS CHARACTERISTIC MOLDINGS, ORDERS AND APPLIED ORNAMENT—HOW THESE CAME TO BE USED AND THE PART THEY TAKE IN GIVING NEW HOUSES THE OLD FLAVOR

BY LOUIS BOYNTON

Photographs by Frank Cousins, M. H. Northend and others

[*A series of articles by prominent architects appeared in this magazine last year. In it the characteristics of the more common architectural styles, used for country houses, were outlined and explained. Another matter of great importance to those who would build consistently is the detail. Mr. Boynton's series of articles will explain the origin and use of motives, ornament and molding characteristics in connection with the better known styles of architecture. So far as we know, a discussion of this side of home building has never before been attempted.*—EDITOR.]

IT is frequently the case that people who are planning to build, wish, either from environment or association, to build a Colonial house. This is a laudable ambition and generally results from a desire for a simple, dignified, refined home. Unfortunately, comparatively few people have any definite ideas as to the essential characteristics of a real Colonial house.

We are all more or less familiar with the appearance of this type of house, but it cannot be too strongly emphasized that Colonial architecture means a great deal more than a wood house painted yellow with the moldings and ornament in white. Of course all Colonial architecture is a more or less distinct form of the Renaissance. That is to say, it is based on the Classical Revival in England, which was started by Inigo Jones and Sir Christopher Wren, and which developed into the Georgian style, which was contemporary with the American Colonial.

In fact, there are a number of Colonial churches—and these among the best examples, which are said to have been built from the designs of Sir Christopher Wren.

I think if one were to define the chief quality of Colonial architecture, one would say that it was a certain restrained refinement.



The ends of the stairs in Colonial work were usually embellished with a hand-carved bracket motif, often of great beauty

While the general form, and the arrangement and spacing of the openings, of such a house, is most important, as it is in all architecture, the peculiar character, or "flavor," is almost wholly dependent on the "detail;" that is, on the kind and relative size of the moldings used and on the ornament employed.

Now the kind of moldings used in Colonial work were extremely characteristic and often differed radically from those common to any other style. The houses were built of wood or brick, but the trim and ornament were almost invariably executed in wood — consequently wooden details of the exteriors more nearly resembled the woodwork of the interiors than the stone detail from which the motives were derived. Undoubtedly, the details of a Colonial house were worked out by the builders as the work progressed rather than by a "designer" in the quiet seclusion of a draughting-room. For it seems to have been the fact that in many of the Colonial buildings there was no professional architect but that the design was adopted from some similar building, and the detail was largely governed by some careful English handbook with accurately drawn plates and explicit directions. And the consequence is that the work has the "hand-made"

quality which is so essential to good results.

In this day of machine-made products it is difficult to realize that the Colonial house was almost wholly hand-made. That is to say, the carpenter had to plane his boards *by hand*. The molded work was executed *by hand,* by the use of a set of molding-planes, which were a part of the kit of every carpenter, and it was by an intelligent use of a rather limited assortment of forms that the results were obtained. In the same way most of the ornament was obtained by using "stock" dies, into which the paper pulp was pressed, and in this way the true *papier-maché* was made. This in turn was glued into place, and when painted, produced the effect of carved wood.

I remember some years ago seeing a fragment of a very elaborate and beautiful cornice which was taken from an old house on Beacon Hill, in Boston. All the ornament was made of a very hard *papier-maché* which had stood perfectly for over a hundred years.

In this connection I recall the experience of an architect who had taken a house in some small town—perhaps in Maine—but wherever it was, in some inaccessible spot. It was necessary to make some alterations which, as I remember it, involved building a mantel. The village carpenter was called upon, and it developed that he not only had the Yankee cleverness of his ancestors but also had inherited their tools. That is to say, he had a complete set of molding-planes, and when it came to working out the detail of the mantel and other woodwork he took a keen interest in using the materials and instruments at his command, to the best artistic advantage, and showed a really surprising ingenuity in helping to work out the results.

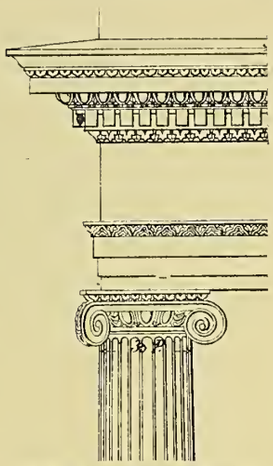
I firmly believe that the delightful quality of much of the Colonial work, especially in New England, was due to this intimate relation between the actual workman and the work, and that the imperceptible variations from mathematical accuracy which resulted from the work being hand-made, adds materially to its real character and charm.

The writer has found great difficulty in getting wood workers to treat elaborate wood carving as a hand-made product. The average wood carver feels that he is slighting his work unless he can make it as mechanically perfect as if it were made by the carving machine, and the result is dry, cold and uninteresting. Naturally, therefore, it is extremely gratifying when one is able to find workmen with sufficient imagination and intelligence to leave the tool marks in the carving and to preserve the free, crisp character that is natural to this kind of work.

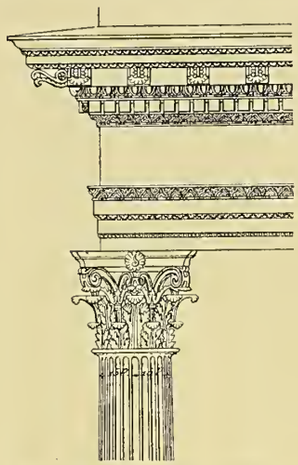
This intimate relation between the worker and his work is a much more prominent feature of the New England work than of the Southern Colonial. Much of the building in Virginia, Maryland and the Carolinas was inspired by the work of Thomas Jefferson. "Citizen" Jefferson was, of course, in close political sympathy with the French; and when he not only founded but designed the University of Virginia and his own "Monticello," he was undoubtedly strongly influenced by the contemporary work in France. This was the period of the Madelaine, the Pantheon and the Invalides, etc., when they were building the *"bon architecture Francaise,"* and his traditions were much more nearly those of stone architecture than those of the English Georgian work. Consequently the later Southern work had a much more robust scale than that of New England, and while it has a great deal of charm, it is quite different in sentiment. To appreciate the influence of Jefferson one has only to contrast the simple dignity of Mount Vernon, with its distinctly wooden character, with later work—notably the University of Virginia, which might very well have been built in stone.

Perhaps the most characteristic feature in the Colonial design is the cornice; and the ornament applied to this is as significant as any feature of that style. I suppose the average "man in the street" has at least a speaking acquaintance with the "orders" as applied to columns and capitals—knows, for example, that the Doric cap is very simple; that the Ionic is a little more ornate, with its volutes and curls, and that the most salient feature of the Corinthian order is the very much conventionalized acanthus leaves which are wrapped around the top of the column.

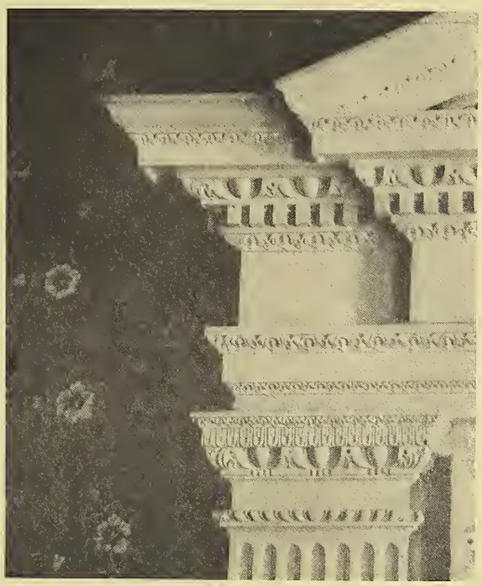
And I suppose that the information stops at this



The Ionic order with its characteristic volute capital



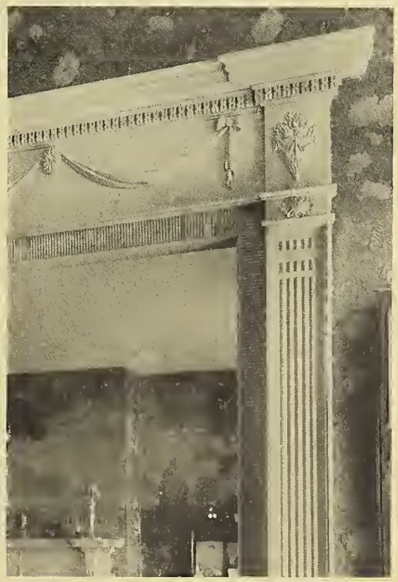
The Corinthian order, characterized by its acanthus leaf capital



A bit of an interior doorway carved by the Colonial craftsman builders. There are several variations of the lamb's-tongue molding here



An old New England doorway showing curious dentils. The garlands are of papier-maché



Another New England doorway in excellent condition. The fluting of the pilaster is an innovation

point or even short of it. Probably few people know that each of these styles or orders have their characteristic type of cornice and that the trained observer can distinguish as readily the difference between a Doric and a Corinthian cornice as between the capitals of the same styles.

In the Colonial, however, the distinction is sometimes lost, or often certain characteristic motives of one style are introduced quite naïvely in a strange place. However, this was almost invariably done with such excellent judgment and good taste that it rather enhances than detracts from the effect. An interesting example of this is the doorway where the fluted pilaster is very good Doric and the cornice is much more Corinthian than anything else. But where the scale is perfectly preserved the effect is much more charming than if the order were more nearly correct.



Copyright, Boston Photo News Co.

A beautifully proportioned New England doorway in which the slender Corinthian columns are used. The row of balls just over the frieze is a typical American molding



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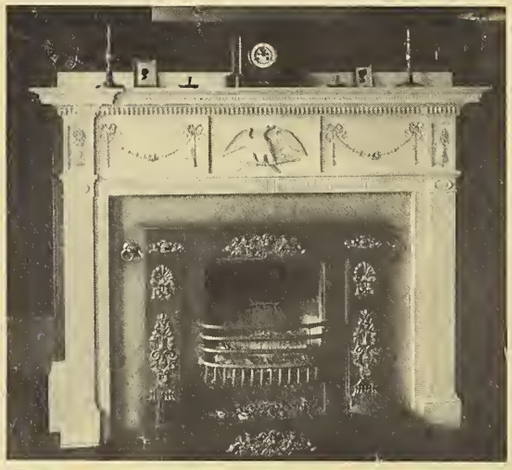
A doorway similar in proportions to the adjoining one, but using the Ionic order. The guttae below the frieze are properly found only in the Doric order below the triglyphs

The use of the modillion blocks in the cornice in conjunction with the Doric order is very characteristic of Colonial work. In fact, it was a favorite motive and was used with freedom and great frequency, and with any of the orders or where no order was used.

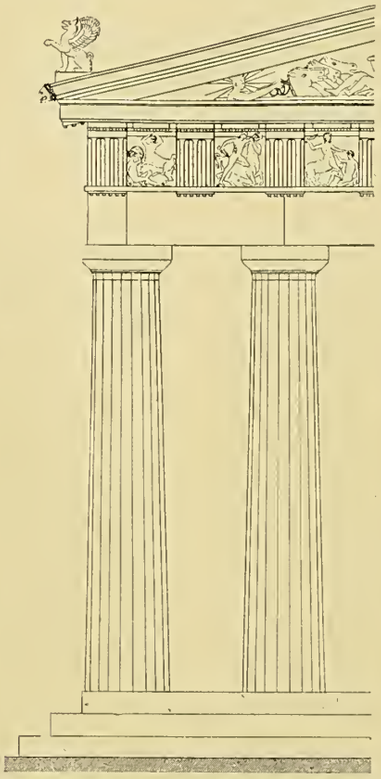
Now the ornament naturally falls into two divisions—the decoration given by moldings, and free or applied ornament. In both classes the motives in common use are comparatively few. In the former class is the egg-and-dart, the dentil course and the so-called lamb's-tongue ornament, with its variations. Each of these forms were subject to an almost endless variation, but the motive is not difficult to trace even when the original form is almost lost. In the moldings below the projecting part of a cornice or mantel-shelf the dentil is most frequently found, and when the egg-and-dart is used, it should be above the dentils, with the "lamb's-tongue" below them. The dentils are easily recognized by their resemblance to a row of teeth with spaces between; hence the name. This motive was sometimes developed by the Colonial designer so that little remains but the vertical feeling and the general form of the molding, as may be seen in one of the illustrations.

The egg-and-dart is to be distinguished by the egg shapes surrounded by a sort of shell and separated by darts or arrows pointing down. The shell form is often joined at the top and the arrow is not always clearly distinguishable, but the basic idea is there and may be readily known. This is a form of ornament that is adapted—perhaps better than any other—to a molding which is, in profile, approximately a quarter of a circle. That is to say, a molding that acts as a bracket or supporting member for a still more projecting mass above.

The lamb's-tongue ornament is used when the molding is a reversed curve in profile, with the convex above and the concave below. In its simplest form it consists of a series of flat leaves or tongues, separated by a dart somewhat like the dart of the egg-and-dart. The dart persists in all the variations.



The use of reeding (shown surrounding the soapstone facing) was common in the Colonial detail, but it has no precedent excepting in Egyptian columns



The Greek Doric order. There are no bases to the columns, and the triglyphs are supposed to represent timber ends



The use of baskets of fruit and other applied ornament in frieze panels over the pilasters or columns was a characteristic of Colonial doorways and mantels

which are many, but the tongue is developed into a variety of forms of leaves, buds, etc., while the general form and proportion of the ornament remain unchanged. In the detail of a doorhead shown here are five different sizes of the motive with considerable variation.

The above three forms of ornamented moldings are the most common in Colonial architecture, although the egg-and-dart is sometimes replaced by a row of balls—as in the cornice of the old Hoffman House at Salem. The use of the guttae, or drops, below the frieze is a very interesting example of the mixing of the orders. The guttae are properly found in the Doric order below the triglyphs, as in the Boardman House, but in this case they were used quite naïvely with a sort of Ionic order.





Two forms of the broken pediment. The pineapple ornament appears in the left-hand illustration, but it was usually far more conventionalized and appeared more like an acorn

Another common form of ornament was the "reeding," which gives the effect of a series of parallel lines by the use of a group of half-round "reeds," placed close together.

As to applied ornament, the garland was in most common use. This is usually rather thin and attenuated and was often composed of a series of buds; it sometimes imitates the folds of cloth draped between rosettes or ribbons. The use of garlands in the frieze under a cornice is a very common Colonial motive, and it is to be found in many and varied forms and in all sorts of places. In the Southern work it was often more robust and had more of the character of stone detail, as in the illustration of detail from the University of Virginia. (*Continued on page* 51)

The Best Use of Stonework

VARIOUS WAYS OF FINISHING STONE FOR USE IN BUILDING—THE AVAILABLE METHODS OF LAYING IT UP IN WALLS—THE MORTAR JOINT AND ITS PLACE

BY HAROLD DONALDSON EBERLEIN

Photographs by Jessie Tarbox Beals and others

[*Two houses that are alike in every respect, but the stone walls may be almost as dissimilar in appearance as if one were of stone and the other of brick. The best use of wall materials is a subject of as great importance as the architectural style that is to be followed, yet the layman, as a rule, seems not to appreciate this fact; to him a stone house is merely a stone house—until he realizes that his finished home falls far short of his ideal. This article is the first of a short series, in which the aim is to make clear the possibilities in securing distinctive character through an intelligent use of the various building materials. The author wishes to give credit to Mr. H. L. Duhring, architect, for many helpful suggestions.*—EDITOR.]

SURELY, if Shakespeare could make the Duke in *As You Like It* find subjects for "sermons in stones," the homebuilder of to-day will find it worth while to devote a little thought to the appearance and construction of the stone walls of the house in which he will probably live the rest of his life—a house that will go down to posterity as "the house that so-and-so built," and that must surely stamp him as a man of taste and good judgment or the reverse; for houses inevitably reflect the character and personality of their builders, notwithstanding the intermediary function of the architect. We have on all sides, in ever-increasing numbers, houses whose walls are both well and ill built — excellent examples of what to copy and what to shun.



A random rubble of field stones and cobble-stones, with the joints raked out—modern work as is indicated by the latter feature; Colonial builders did not rake joints

If the windows and doors of a house may be likened to the features of a face, the lines of the walls and the angle of the roof to the facial contour, then may the wall surface be fitly called the architectural complexion. It is surprising how much character the face of a wall imparts to a house. Now, you will agree, it is a great pity to see a noble face with fine features marred by an ugly complexion full of unsightly blotches, and it is just as much a pity to see a house of

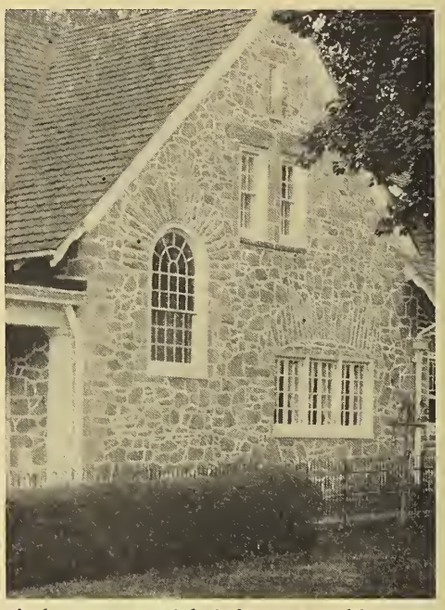
UNION



Random rubble of stone that has been left with its face as quarried. Donald C. Hering, architect



Quarry-faced course rubble, in which type an approximately horizontal line is formed with each course



A house remodeled from an old stone barn. The quoins, lintels and arches give an interesting variety to the wall

really good proportions and details spoiled by false-principled and grotesque masonwork.

How is it that such offensive stonework can be perpetrated in this day of able architects and when popular good taste is admittedly increasing? The truth is that many people on looking at an object get a quick general impression that the appearance is either pleasing or unpleasing. They either like or dislike it, but, in nine cases out of ten, they cannot tell exactly why. They fail to analyze their impressions and determine what details create the effect they like or dislike, and as they cannot point out the flaws, naturally, they cannot insist on a remedy. Another trouble is that in the architect's drawings the exact appearance of the masonry is too often not adequately shown, and the specifications to the builder sometimes miss being specific. Nothing can be more fatal to the successful execution of stonework than to trust to the discretion or taste of the builder or stonemasons. They will bear close and constant watching. Then, too, a further cause of failure is too easy compliance with the behests of the contractor or stone dealer, who will probably advance a dozen specious reasons, dictated of course by his own personal interest or desire to escape inconvenience, why you should not use the particular kind of stone you wish, but the kind he wills. He will be insistent, but don't be browbeaten by him. In justice to the stonedealer, however, be it said that this insistence is sometimes due to his desire to do a "good job" by supplying what he considers the best quality of stone. This has a cold, hard color and comes from deeper down in the quarry than the mellower colored stone, stained by oxidation where the surface water has seeped through some fault or line of cleavage in the rock, and which the architect prefers for esthetic reasons.

In housebuilding, as in everything else, it is the little things that count, and this paper is written to direct attention to one important detail of the house, the texture or appearance of the wall face, a detail very significant but often neglected—at least, so far as the owner is concerned. The two factors in masonry are, of course, stones and mortar, but the treatment of both is susceptible of the widest variations. Carefully avoiding as many technicalities as we may, let us consider the subject from the layman's point of view. Any man, whether he has technical knowledge or not, if he uses his eyes, can see what is being done and can insist on definite plans being carried out.

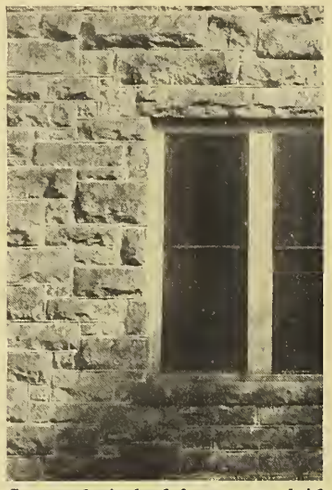
Colonial masonry has been selected for special attention because we have so many examples of really first-rate work, and so many good modern reproductions, to make comparisons with, and also because it embodies certain principles we cannot afford to neglect. Moreover, the same general principles apply, no matter what the style of architecture. Another reason, still, for picking out the Colonial style for illustration, is that in Colonial and immediately post-Colonial times people of cultivation and taste controlled the erection of buildings. Later, about eighty-five years ago, came a decadence of taste that lasted with few abatements till its ultimate fruition in the vintage of the "Centennial style"—a calamity from which we have not yet entirely recovered. For those who have



Regular course ashlar—stones squared up and laid with regular horizontal joints



"Opus reticulatum"—a method fit only for the paving of streets



Squared pitched-face stone laid as broken—course ashlar. The edges only are straight



A dry wall—that is, laid up without mortar. It is suited only to garden walls



This cobble wall has had its joints raked out to give rougher texture to the surface and to gain strong shadows



Wide flat pointing, where the front of the mortar joint is flattened out over the edges

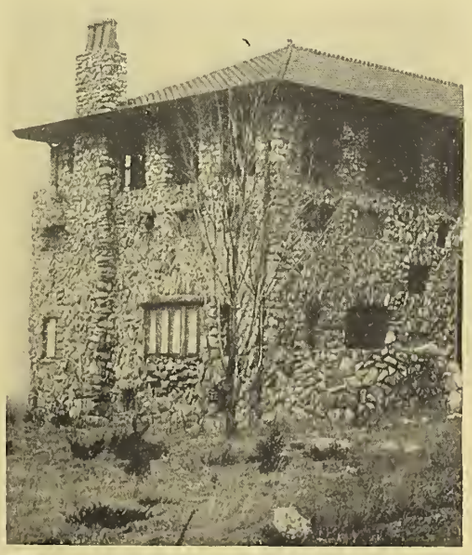
not the buildings to look at, we need only instance as proof of the prevalent execrable taste, the pictures of the fearful and monstrous clothing in which people proudly arrayed themselves during most of that period. During all that time half-educated taste and distorted ideas figured in nearly every building that went up—just the kind of thing that makes our English cousins and their Continental neighbors look down on us as raw and crude. There were fortunately some notable exceptions to this reign of hideosity that stood out boldly as witnesses for artistic sanity, but they were only exceptions.

Colonial stonework commends itself for conscientious modern reproduction by its simplicity, its congruity with its surroundings as well as the style or purpose of the building for which it was employed, its comparative cheapness, and, finally, by its constructional honesty and strength. The last two were indispensable qualities before the use of Portland cement in mortar caused modern masonry to deteriorate by supplying a binding element that would secure cohesion in spite of faulty stonelaying. All masonry may be classified as good or bad according to the extent to which it has to depend on the mortar. In Colonial times they had to build the walls to stand with little aid from the mortar—practically dry walls, hence well bonded and firm, having the appearance, as well as the actuality, of strength.

The kinds of stonework commonly used by Colonial builders were random rubble of fieldstones or cobblestones or else of undressed rock exactly as it came from the quarry; quarry-faced, coursed rubble—when the stratification of the stone permitted it; or broken coursed rubble, quarry-faced. By quarry-faced masonry we mean that in which the faces of the stones are left as they come from the quarry. When something more formal was desired, as sometimes for the front of a house, regular coursed ashlar of native stone was used, while the sides and back were finished in random rubble. An illustration shows a building where coursed ashlar of brown stone was used for a more ornamental effect. With such simple materials, simply and directly used, it is no wonder the Colonial builders secured constructional honesty and durability.

Such a nightmare of diseased imagination as a random rubble wall "with hammer dressed joints and no spalls on face," otherwise known as *"opus reticulatum,"* was undreamed of. The Romans used "opus reticulatum" in the only way it should be used—for street paving. It was left for the nineteenth century to introduce that abomination, shown in the cut, in company with mansard roofs. The end of such walls is that the facing stones not infrequently fall off, when there is any defect in the mortar, disclosing all the underlying imperfections, besides weakening the whole structure. A wall of this kind is just as odious as a woman who paints and enamels her face or bleaches her hair. Compare a piece of such unconstructional masonry with a wall of sturdy Colonial type and you

(*Continued on page* 50)



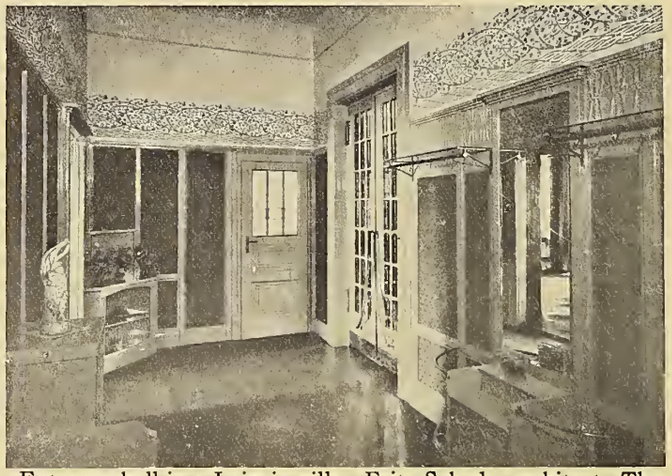
What to avoid—an incongruous and unstable looking pile that suggests only a Chinese puzzle



The need for color variety in masonry is well met in this Germantown stone marked with iron and mica



Entrance to a house in Aichach, showing the typical heaviness and solidity of German detail



Entrance hall in a Leipzig villa—Fritz Schade, architect. The combination of hat-rack, umbrella stands and mirror is a built-in architectural feature



The German architects give much thought to the modeling and color decoration of wall surfaces



A gentleman's study or work-room. There is a tendency to abandon the Nouveau art curved lines for geometrical ones



The Germans are far ahead of us in their combination of usefulness and beauty in the arrangement and equipment of their kitchens



A modern German dining-room designed by Prof. Peter Behrens, showing the recent tendency towards the use of straight lines and spot decoration as contrasted with the former uneasy curves



An unusual architectural treatment of a corner of the living-room, making a corner for the housewife

SUGGESTIONS FROM GERMAN COUNTRY HOMES



A lady's bedroom. When the Germans do adopt a decorative scheme they carry it consistently through and allow no jarring note of left-over furniture or gift bric-a-brac to interfere with it

How to Read an Architectural Drawing

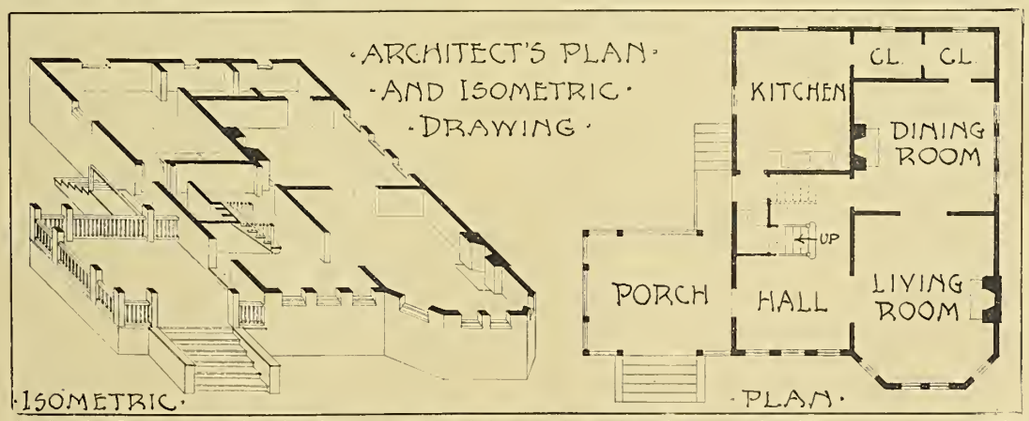
THE MEANING OF A FLOOR PLAN OR ELEVATION OF YOUR HOUSE AND HOW TO INTERPRET IT SO THAT THE FUTURE BUILDING MAY NOT BRING UNEXPECTED AND UNDESIRABLE FEATURES

BY RUSSELL FISHER

IT is not surprising that many a new home turns out to be something entirely different from the owner's mental picture formed beforehand. There are comparatively few people, outside of the architects themselves and those trained to read technical drawings, who readily grasp the full meaning of a set of house plans. This one fact is responsible probably for the majority of "extras" in building a home—it is not until the building is well under way, with the roof on and the partition studding in place, that the owners begin to realize that the result is going to be different from their expectations. Then follows the series of changes, sometimes few and slight, sometimes revolutionary, that will bring the desired result. Too frequently, however, these revisions are too radical to be undertaken at that late day, and the house is doomed to be a misfit for the remainder of its life.

An architect is almost invariably desirous that the owner and his family shall understand thoroughly what is being planned, and he will usually make every effort to explain the meaning of plans, elevations and details. One difficulty in his way, most frequently, is the reluctance of the family to display their inability to interpret the drawings, and their consequent blind acceptance of the plans or a mere pretense of understanding them. There is certainly nothing to be ashamed of in a lack of the rather technical knowledge needed, and it is unfortunate that these people do not ask at once for further information. There is practically nothing about the ordinary house that cannot be made readily understandable to the layman in some way; if plans and elevations are Greek to him, perspective drawings of interiors as well as the outside of the house will surely convey a fuller meaning. There may be an extra charge for making these, as they are not ordinarily considered to be included in the usual services of the architect, but this amount will be well spent if it will insure to the owner the carrying out of his desires.

The most important part of any house is its floor plan, and it is naturally therefore imperative that its meaning be well understood in advance. A plan as shown on the architect's drawing is a horizontal cross-section through the building just above the window-sills. The diagram reproduced herewith makes this clear. Side by side are shown a simple first-story plan and an isometric drawing of the building up to the height at which the plan is taken. If your own house plan is not clearly understood, by all means have it translated into this more legible form. The isometric drawing, as you know, differs from a true perspective in that the actual dimensions of depth and width are laid out on the horizontal and receding lines (the latter usually drawn at an angle of 45 or 60 degrees to the horizontal.



A simple first-story plan is shown at the right, such a drawing as should convey accurately the arrangement of this portion of the interior. At the left the same plan is translated into an isometric drawing representing the house as it would appear if sawed through on a plane just above the window-sills

The size of the various rooms shown on a plan will have little significance unless you compare these with the dimensions of rooms in houses already built. That is the best way to determine whether they will conform to your own needs. And right here let me warn you that the completed house will never afterwards appear so small as when it is first staked out on the site. An owner has frequently felt, to his chagrin, that his house must be enlarged by at least half, judging from its apparent size when staked out or even when the frame was up. From that time on each operation makes the rooms seem larger. Lathing, plastering and finally the addition of furniture, tend each to increase the apparent size of the interior.

One of the stumbling-blocks for the layman is the representation of the staircases. In the plan given the stairs are shown in solid lines below the line of the section, being dotted in above this plane. Where one stairway runs over another, as is usually the case, it is customary to indicate about half of each, separating them at the junction by a broken line. Other plans may show the stairs from first to second floors complete on the first floor plan; those from the cellar to first floor on the cellar plan; and those from second to third floor on the second floor plan.

The elevations of a house offer some difficulty also to the layman, for two reasons. One is that the dimensions of depth must necessarily be omitted. This may be more clearly understood by constant reference to the plans, but is unmistakably shown in a perspective. The other reason is that one will never see the building in direct elevation after it is built. An elevation, of course, is drawn as if one were looking directly at each point at right angles to the wall. The roof expanse appears as it would if one could be lifted up to see it on a level with each point—a manifest impossibility. An owner frequently objects to the apparent roof expanse on the ground of its too great height. It will be readily apparent, however, that a person standing on the ground in front of the house will see the receding roof at an acute angle and hence as a very much flatter rectangle than appears on the elevation.

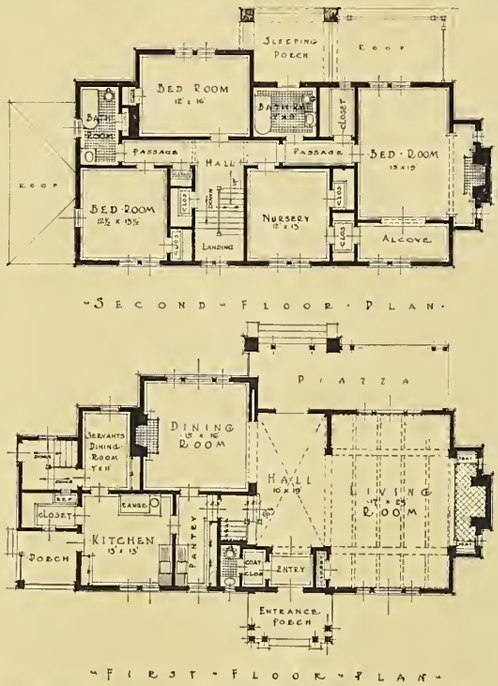
The difficulties of reading architectural drawings are greatly increased in the case of a house having its main floors broken up into different levels. An isometric plan will help to make the scheme clearer, but interior perspectives should be made as well, and in a particularly complicated design it may be advisable to have a small model made of wood or even cardboard.

Another aid to the proper conception of the completed building is the making of cardboard models of each room.

The stucco is a warm gray—almost a cream color, contrasting with woodwork stained a dark brown. The shingled roof, laid in wavy lines and "woven" over the round edges, is stained a dark straw color



The main piazza is at the rear of the house, commanding the best view from the hilltop site



Another example of rational planning in bringing the kitchen to the front and giving the important rooms the best outlook



An outdoor sleeping-porch is provided above a portion of the main piazza, where privacy is insured

THE HOME OF MR. H. M. TURNER, CHAPPAQUA, N. Y. *Alfred Busselle, architect*



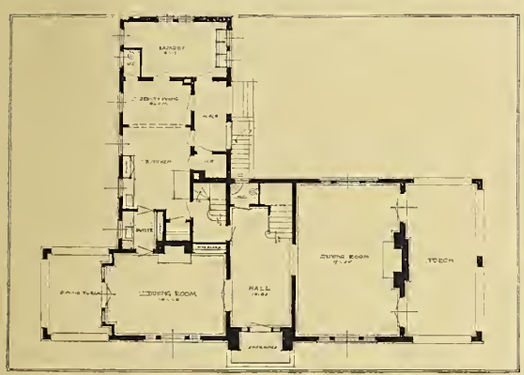
The house is of stucco on a wood frame. This use of two gables on the front is seen in many of the modern English homes, and there as here the bringing down of the roof lines at the ends helps greatly in tying the building to its site



The larger of the two end porches is screened in during the summer months and provided with partitions of glazed sash above a wood base for cold weather. The plaster finish is very rough in texture. French windows open out upon the red tiled floor

A HOUSE AT CEDARHURST, L. I.

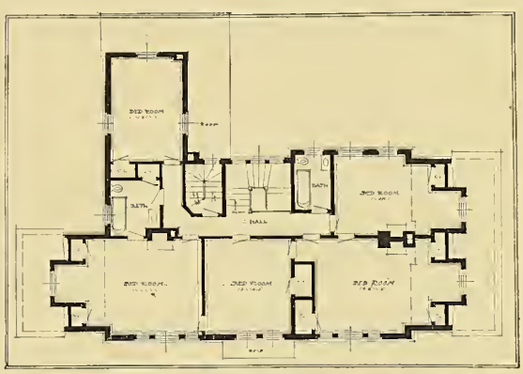
Louis Boynton
architect



The house is rather larger than might be expected from the photograph of the front. A deep wing back of the dining-room provides more than the usual amount of space for kitchen, servants' dining-room, alcove, laundry and closet space. The smaller end porch is convenient for dining outdoors



An exceptionally pleasing hall has been secured by the use of square red quarry tiles for the floor, contrasting agreeably with the white woodwork



Five bedrooms and two baths are included in the second story; the service stairway extends to the third floor and servants' bedrooms. The location and size of the wing bedroom indicates that the roof at one side and the end is carried down with a long sweep as over the end porches



There is a refreshing coolness in the living-room treatment. Most people would be afraid to attempt the combination of white walls and white woodwork, but the furniture covering and pictures may be used to introduce the needed color



In contrast to the light living-room is the dining-room across the hall. Here the walls are paneled to the ceiling with dark stained cypress, finished dull. The abundance of windows prevents any suggestion of gloom



Inside the House

Timely Suggestions and Answers to Correspondents



The Editor will gladly answer queries pertaining to individual problems of interior decoration and furnishing. When an immediate reply is desired, please enclose a self-addressed stamped envelope.

Japanese Wall-Papers

A NOVELTY in the way of fall decorations is the hand-printed Japanese panel that comes in wonderfully effective colorings and designs and may be had singly or in sets. The single panels are highly decorative, and are for the most part printed in rather delicate colors, the patterns including wistaria, iris, cherry blossoms, storks and all of the favorite effects that are particularly Japanese-y.

The panels are about three feet wide and average eight to ten feet in length, and the prices are anywhere from twenty to thirty dollars each. The work on them is really wonderful, the larger part of the design being at the lower end of the panel, the upper part shading off into the most exquisite colorings. Framed with strips of bamboo they make stunning decorations for walls, particularly in high ceiled rooms where there are great expanses of wall space.

The panels that come in sets are neither so elaborate nor so expensive as the single ones, and are intended to be used as wall paper rather than as separate decorations. They are decidedly different too in color and design, being printed in rather more neutral tones and, instead of small figures there is a Japanese landscape effect that covers the entire length of the panels. Each of the sections is printed in a different design and when fitted together the result is rather like the old Colonial wall paper that showed landscapes and hunting scenes on quite a large scale. A set of this sort contains twenty-four panels and costs one hundred and eighty dollars.

Less expensive are the panels of heavy paper that look exceedingly like burlap and have a sheen of gold over the surface. They come in dark rich colors, browns and greens and blues, and each panel has a conventionalized figure in solid color at the top. A heavy Japanese paper that is sold by the roll rather than by the panel is in plain dark colors with an all-over design like a fine network in gold.

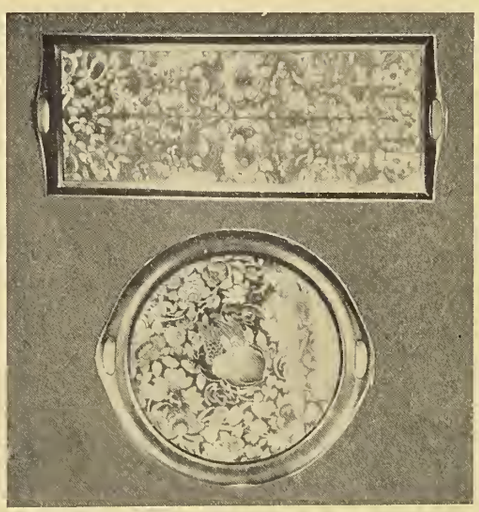
For effective tones there is nothing more satisfactory than the Japanese straw paper that has been in use for some time. Besides the solid colors, in which there are a number of excellent tints, this material is now shown with a conventionalized figure of rather small size, and splotches of dull gold in the background, cleverly designed to look as though a thread of gold had been woven in at irregular intervals.

Charming friezes in poster effect for a child's room are also included in the new Japanese wall papers. Quaint figures of little girls and boys that look absurdly like the familiar Japanese doll, with tea tables and parasols, are printed in gay colors and silhouetted on a cream ground, making a fascinating procession for the nursery wall.

Indian Drugget Rugs

HOUSEHOLDERS having difficulty in keeping Mission furnished rooms in perfect harmony may find a solution of their problem in an East Indian rug recently introduced here. The general texture of these rugs and their form and design resemble the Navajo work. The weave is like a loose kilmarnock or like that found in the so-called Bungalow Rugs. Two colors are used, browns and greens predominate, although there is a large variety of shade and tone. The pattern is woven through making the rugs the same on both sides. In the center there is a light ground with a few strong conventionalized figures. Drugget borders are generally wide, darker than the center and with an Indian scroll design. Several sizes are to be had, with about 8 x 12 feet as standard. The price is around $25 for this size.

The severe plainness of line and the soft neutral tones make a very happy combination with the form and color of Mission or fumed oak furniture. The bold design, also, and the loose weave are thoroughly consistent with sturdy oak furniture.



A good use for old Chinese embroideries—held under a glass plate as decoration for a mahogany sewing-tray

Trays Made of Chinese Embroidery

THE present fashion of wearing Chinese Mandarin coats for evening wraps has caused an enormous demand for these garments, and as a result the buyers for Oriental houses are securing everything in the way of a Mandarin coat that they can get hold of.

They are really so valuable that not one is overlooked on account of its condition, and even though a coat is so old and worn that the material is in tatters, it finds a ready purchaser. The coat itself may be hopelessly beyond repair, but the handsome embroidery with which it is ornamented is still intact and some use is made of every stitch of it.

One of the ingenious schemes for preserving the embroidery as well as showing it to the best advantage is to use the various pieces for the bottoms of trays, the size and shape of each tray depending, of course, on the particular piece of embroidery. The rims are of mahogany or cherry, some with carved handles, others consisting of merely the smooth beveled edges of wood, and the embroidery which forms the bottoms is under glass.

The big embroidered discs that ornament so many of the more elaborate Mandarin coats are used for the circular trays that are from eight to ten inches in diameter. The bands around the sleeves are made up into the long narrow cocktail trays. Sometimes a single band is used

if it is wide enough, if not the two pieces are joined to make a rectangular piece of the required size.

Larger trays, possibly ten inches wide and twenty-five inches long, are made of the wide embroidery that finishes the lower edges of a coat. The front and back of the garment are exactly the same width, but as it opens in front there are necessarily two front pieces which are joined almost invisibly, and then the two



Chafing-dish cabinets with space for all the "mixin's" may be had in various woods to match your dining-room or den furniture

widths are put together for the tray.

Mounted on wood and placed under glass the embroidery seems to show to even better advantage than when used in any other way. The trays range in price from fifteen to thirty dollars each, and vary in design from the piece embroidered in rich colorings with heavy silks, the regulation Chinese embroidery, to patterns in which so much gold thread is used that they look like magnificent pieces of cloth of gold. The bottoms of the trays are covered with velvet to prevent their scratching, and with the glass tops which can be easily kept clean they are as useful as they are effective.

Hand-Painted Door Knobs

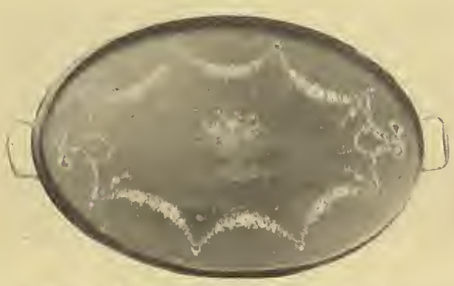
THE newest—or perhaps one should say the oldest—thing in doorknobs, is the hand-painted porcelain knob. In England collectors for some time past have gone quietly from house to house in the old sections, picking up handsome specimens which have survived from the times of Louis XVI, and many of these have been reproduced for distinctive English homes. The American designs are copies of the old English ones, although it would be possible to have any desired design transferred to the porcelain knob, if one is willing to pay the price. Copies of the old English designs can be had as low as $65 a dozen, and as high as $8 a piece. With wrought or cast brass or bronze "rose" (the little circular piece which makes the knob stand out from the door) instead of porcelain rose, the price is less. In a period room, the old English pattern should be followed. In a room which belongs to no period the knobs may be painted any desired design. In a bedroom where the prevailing tone is blue, the doorknobs as well as other smaller knobs which may be necessary for drawers, or shutters or cupboards, might have a blue Delft design. A clever artist who understands working with porcelain can decorate the knobs, or the work may be arranged through a dealer.

For Chafing Dish Users

THE chafing dish cabinet is bound to appeal strongly to the masculine mind as well as to the feminine. Everything in one place to facilitate the making of the late Welsh rarebit or the Sunday supper, is a strong recommendation to those who have the "work end" to attend to. The cabinet may be ordered in any wood to match other furniture, mahogany, as usual, being satisfactory. The wooden tray which rests upon the top of the case has a glass base over wood, and is separate from the cabinet so the dishes may be removed upon it. The little drawer provides a place for the silver, napkins and other such requisites; while half of the top section is devoted to condiments and half to dishes.

Hand Painted Wood Trays

WOODEN table-trays or tea-trays are now made to match any period of furniture. The most attractive of these are made from white or red mahogany, or satinwood, in oval shape and daintily decorated with wreaths of flowers and ribbons hand painted on the wood. Over this decoration is a glass top to protect the wood and painting from heat and possible stains. These trays belong primarily to the Adam period of dainty decorated furniture, and are made oblong and round as well as oval, and in enameled as well as natural woods—the most beautiful ones costing upwards of $25. Plainer trays may be had at a lesser price.



Another scheme of decorating the serving-tray is the painting of dainty flower and ribbon designs upon the mahogany or satinwood

The Colonial Reading Stand

FOR the person who has acquired the bad habit of reading in bed, a luxury which most of us have desired from our early youth, the Colonial bed candelabrum is a boon, as well as an addition to the furnishings of the room. The candelabrum is made for electric connection only, and can be moved from place to place as desired. The stand itself is about 4 ft. 6 in. high, the candelabrum increasing its height by about six inches. The stand is modeled on strict Colonial lines, and is an ornament as well as a very useful piece of furniture, at a price within the reach of all.



A reading-light stand for those who may enjoy the luxury of reading in bed, or for the invalid

A Guest Room Suggestion

AN attraction in the guest-room is a small lacquered tray containing articles to whiten and polish the nails, also several creams and lotions for the skin. A box serves the purpose better as it hides the labels which should be preserved for the user.

Rubber Mats Prevent Wear

PERFORATED drainboard mats of fine white rubber can be had to fit any shape or size drainboard. They lessen the danger of chipping the dishes.

Very pretty white rubber mats to place underneath a flower pot, water pitcher or teapot will prevent any injury to the polished surface underneath. They are heat-proof and can be kept perfectly clean. They are obtainable in various sizes and shapes, in beautiful designs, from 15 cents upwards.



Garden Suggestions and Queries



The Editor will be glad to answer subscribers' queries pertaining to individual problems connected with the garden and grounds. When a direct personal reply is desired please enclose a self-addressed stamped envelope.

January

THIS garden business is a good deal in the nature of a race—a race against conditions, weeds, insects and seasons—or, to combine them all, against time. If there were but time enough in spring, summer and autumn, what splendid gardens each of us would have. But there is not, it's always too short. The only way to get ahead is to save the minutes in every possible way, and anyone having or intending to have a garden, no matter on how small a scale, who wastes spare hours even in mid-winter, is accepting an overwhelming handicap.

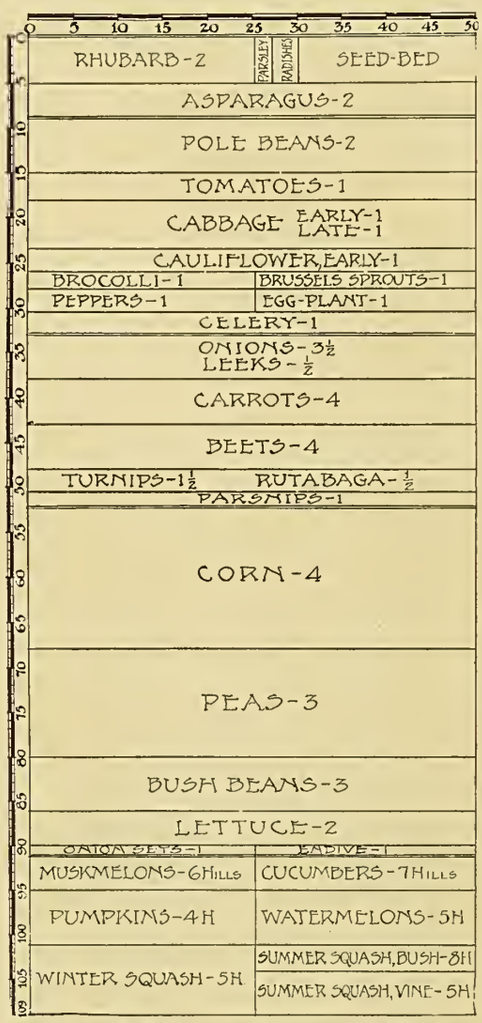
There is no greater saver of garden time than the planting plan. It means that when things open up in spring, every minute can be put into actual work and that everything needed—seeds, fertilizers, plants, etc., will be on hand and in the proper quantities. No waste of time or materials. But more than this, it means vastly better results. Perhaps, if you have been following the advice of this magazine, you are already using a planting plan for your garden. But don't stop there.

Plot the Whole Place

I FOUND that the planting plan was such a help in garden work that I extended the idea to farm crops on one hand and work under glass on the other. To make a plan of a place of sixty-four acres was the work of several Sunday afternoons, but it was very good fun, and only the beginning of more pleasures to follow. Now, whenever I have a half-hour to spare of a winter's evening, I find a great deal of enjoyment in working out still further details, for as yet it is but a rough-hewn model of what I aim to make it. But it is the most interesting game I ever played.

The Vegetable Garden

PERHAPS you have not as yet done anything to your place except keeping the front lawn cut and planting a few vegetables; but even so, even if you have but a 20 x 20 ft. garden, make a plan now for the coming season's plantings. This should be made to scale, using a T-square and triangle for convenience, and should indicate the locality and amount of each vegetable wanted. Keep such vegetables as will remain in the ground all season (onions, beets, carrots, etc.), in one section, as far as possible; and tall-growing varieties, like corn, to the north of more-dwarf ones. HOUSE & GARDEN for February, 1910, contains a more elaborate description of the preparation and use of the



Make a plan now for your vegetable garden—it's half the battle. Numbers indicate rows or hills. Scale in feet is shown at top and left

planting plan, and also a list of the best standard vegetables. In preparing your plan, make careful use of the seed catalogues. Obtain several, and study them thoroughly—only be sparing in your use of novelties until you have tried them out. Towards the end of this month you will want to start the first lots of cabbage, lettuce, cauliflower, beets and onions. The onions may be started now, and set out in the spring, as soon as the ground is dry; they will surprise you and astonish your friends, both in size and quality resembling the giant Spanish onions at the grocers. Use for this purpose Prizetaker, Gigantic Gibraltar or Mammoth Silver Skin. Plant in "flats," in rich, light soil, in rows about three inches apart, and half an inch deep. When well started, thin out so they will stand about eight or ten to the foot. They should be about the size of lead-pencils when set out (about the first part of April).

In the Flower Garden

IF you have no regular flower garden, devote a small part of your vegetable garden to flowers this year. Or, better still, make a long, narrow bed or border for flowers along some path. Very many of the annuals and hardy perennials are as easily grown as carrots. You can start them yourself in the house with your early vegetables, or else in a hot-bed, which should be made this month. A few hours' work will see it an accomplished fact. Select a warm, sunny, sheltered spot on the south side of the house, or adjacent to some outbuilding. Clear the ground off level and if it isn't frozen too hard, dig it out to the depth of a foot or eighteen inches, six feet square. This will give room for two 3 x 6 standard size sash, which you can buy either glazed or unglazed for a few dollars. Nail a 2 x 2 in. scantling along the north wall at a height sufficient to give an inside depth in front of two or two and one-half feet, at the same time allowing a six-inch drop for the glass. In other words, the scantling should be six inches higher than the front. For the front and sides use ordinary boards, supported by posts, and banked on the outside with earth or rough manure. If no building is available against

which to build the frame, the back is made in the same way as the front. That's practically all there is to the frame, the labor is slight when one considers the reward of a garden six weeks ahead of time.

Into this frame must now go the heating apparatus—twelve to eighteen inches of manure. Some persons make a practice of taking manure (which should be all or largely horse manure), directly from the pit and using it. But a far better way, if you would be certain of results, is to take a sufficient quantity and build it up into a square heap. This should be wet, but not soaked, while being put up. After a week turn it and build into a heap again, putting the "outside inside" as much as possible. After a few days put this into the frame, tramping it down well, then cover this with about four inches of good, rich garden loam. If there is no soil available which is not frozen, you can either get some from the nearest florist's or, before you begin work on your frame, bring in a few wheelbarrows of frozen earth from the garden and thaw it out over the furnace or in a warm cellar. A little dry sand or very well rotted manure will help bring it to the proper condition for use in the frames. The seed may be sown directly into this prepared bed, or in flats placed in the frames on top of the soil. In the former case, be sure that the temperature of the bed has receded to 70 degrees as indicated by a thermometer plunged in the soil. When the little seedling plants are ready for transplanting, set them in straight rows. Brief instructions about the proper way to care for plants in frames will be given next month.

As the days begin to lengthen it will also be a good time to start new plants from cuttings of any favorites you may have on hand that may be increased in this manner. Firm, new growth that will *snap* off when broken is the best to use. Select pieces with two or three "eyes" (leaf nodes), and cut off neatly. Place these in a deep plate or shallow box (not more than three inches deep) filled with coarse, gritty sand—builders' sand is as good as any—kept constantly moist. Shade them for four or five days after cutting, and then give them as much light as possible, without the direct full sunshine in the middle of the day. Most of the ordinary flowering house plants may be propagated in this way, and the small, new plants will be much more satisfactory than old ones to set out in the spring.

Things to Do Now

KEEPING in mind the fact that every hour's work done now will give us just that much better start in the spring race against time, let everything that can be arranged ahead receive attention now.

Look over all your tools, and not only fix but sharpen them. There is almost as much difference between using a bright, sharp hoe and a rusty, dull one as there is between using a clean-cutting and a "pulling" razor. If there are new tools needed, why not get them now, while you have time to select just what you want? You



Sow seeds in flats for both flowers and early vegetables. Then place the flats on top of the soil in a hotbed, transplanting the seedlings into the latter when they become far enough advanced

will probably want more flats and seed-boxes, and there are old ones to fix up. Look over any left-over seeds and throw away any carrots, leeks, onions, parsnips or lettuce seed unless you can test it before using, for it is cheaper to buy it new than to take chances with old seed of these varieties. If you have frames already, see that they are in good repair and get your manure for them now, and treat as suggested above, before putting it into them.

Do you do enough pruning? Nine hundred and ninety-nine out of a thousand beginners do not. Grapes and currants and other small berries may be pruned now as well as later. Cut all very old wood out clear to the ground, and the newer growths back one-third to one-half.

Perhaps the best investment you can possibly make at this time will be one or two good garden books. Word addressed to the editor of this department will bring you a catalogue of books on all rural subjects, which will in itself prove highly interesting. Any studying you may do along these lines is sure to bring big rewards next season. Isn't it better to spend a few dollars in the beginning to find out how to do things in the right way, than to leave it to costly and discouraging experience?



Make a hotbed frame now if you have put it off up to this time. Dig out the soil to a depth of eighteen inches and fill in with manure that has been stacked for several days. On this, spread four inches of good rich loam and cover it with the sash

January in the Greenhouse

IN the greenhouse this is a busy month indeed. Towards the latter part the first sowings of all early spring vegetables will be made, and right away all stock plants not already started into growth should be given more moisture and heat, to start new growth for cuttings. The middle of this month should find the last crop of indoor lettuce in the beds, and plants stored for the first crop in the coldframes. Tomatoes that were sown in December will need repotting preparatory to being put in these beds or fruiting boxes, and cucumbers should be brought along to follow the lettuce. If there are not sufficient pansy plants in the frames, start a second crop now; with care they will make fine plants. If you are short of cannas, start them new, as the new shoots taken off and treated as cuttings will do finely. Put up shelves and make all the extra room possible; it will be needed when the seedlings are ready to transplant, and the plants in pots are given their final shift, which should in most cases be into four-inch pots. Remember that all work done now in advance means more accomplished next month.

Some Ante-Season Hints

MAKE your garden plans early, and be ready for an early spring.

Plant radishes remote from the tract infested by wire-worms last year.

If your beets did not do well last year, try giving them some more manure, not directly, but well worked into the soil before planting.

Do not plant your potatoes in the same old place and invite the scab.

When you are in doubt about crop rotation, plant the beans or peas in the location. They will do as well there as anywhere else with the same amount of fertilizer as is given the rest of the garden.

Work a little slaked lime into the soil where your cabbages are to be grown to prevent club-root. A garden well fertilized better resists the attacks of pests than one meagerly fed.

Carrots grow well in soil enriched with cleanings from the hennery without any other manure.

Fine cabbage follows beans, but does not grow well after potatoes.

It is wise to plant peas where the garden is rather moist. A spell of dry weather tests them severely.

Give the radishes just a little shade.

Lettuce should not be where the soil is too dry or light. Parsley will stand such soil a little better.

M. ROBERTS CONOVER

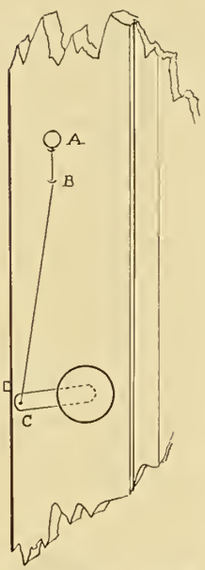
Ingenious Devices

LABOR-SAVING SCHEMES AND SHORT CUTS IN THE HOUSE AND IN THE GARDEN

For Door Troubles

IT is quite a common thing, especially in old houses, to have a flight of stairs end abruptly in a door. In Colonial times with the meagre facilities for heating this arrangement was intended to keep the living-room free from the drafts and chill of the upper chambers. Such a door is quite a nuisance to open, as the knob placed at the ordinary height to be grasped from outside, is at a much lower level to the person standing on the last step inside. He must reach down awkwardly to open the door. This is especially difficult and annoying if he is carrying anything, or if the stairway is dark.

A very simple appliance can be fitted to the troublesome knob by simply utilizing ordinary materials at hand. Fit a short arm, say three inches in length, to the square spindle so that it stands nearly on a line with the latch as in figure (c). This added thickness can be equalized by removing some of the little metal gaskets or washers from the knob shank. Run a fairly flexible wire from the end of this arm through a small staple about eighteen inches above the lock. Attach a knob to this end of the wire and the device will turn the latch sufficiently to release it by simply lifting the upper knob. The accompanying cut shows the manner of placing this device. Such little improvements will tend to give added comfort in the house and will save losing one's temper in groping uncomfortably to open the door.



A device to open a door at the foot of a flight of stairs

Ingenious Washboiler

A WASHBOILER that will not "boil over" has a rim on the inside about two inches from the top. The cover rests upon this brim, and no matter how lively the water boils, it will not run over and "spoil the whole range." E. E. H.

Tight Windows

WHEN the windows rattle and shake, more cold enters the house than even that bleak sound gives token of. Warped or worn weather strips or no such protection at all, allows the sash to have play, and disagreeable rattling, accompanied by chilling draughts and dust is the result. It is unnecessary to go over all the carpentry to repair this, as a little three-bladed metal wedge can be bought which alleviates these troublesome conditions just as well. This little device can be instantly and simply applied with a screw to prevent its being carried away or lost. Mere finger pressure is all that is required to wedge it in place and it can be used perfectly well without being screwed fast. It is of such size and construction that it is hardly noticeable and does not detract from the appearance of the woodwork. These wedges are furnished either in nickel or copper finish and cost twenty-five cents for ten of the former and fifteen of the latter style.



This pivoted three-bladed wedge will prevent a window from rattling

A Convenient Cooker

A USEFUL and labor-saving article is now on the market in a new combination electric stove and fireless cooker. It unites the principles of heat retention as shown in the vacuum bottle, with the advantages of electric heating in such a manner as to save time and trouble. The uncooked food is placed in the utensil, then put in the cooker, and the electric current turned on for the partial cooking. After a short time the electricity is turned off, and the cooking is completed by the stored-up heat, without having to disturb the food.

The invention makes possible the use of electric cooking, hitherto desired for its facility and cleanliness, but too expensive for general use. Indeed, a comparison of cost of cooking the same articles by gas and by this new cooker shows the latter method to be about twelve per cent. cheaper. This method of cooking economizes time for a busy housewife, especially one doing her own work. In the "interregnum" of the kitchen it is a decided boon. For instance, the current may be turned on for a few minutes before retiring, and heat enough will be generated to cook cereal over night and still have the stove hot enough to start the coffee in the morning; or a meal may be started in the morning, and the wife after turning off the current may go out with perfect composure and return to find the meal ready to serve. The service rendered by this device is that it both creates and preserves heat, making it possible to save the unused supply from breakfast cooking for use at dinner time.

Safety Boxes

IN a new house, seen recently, the mistress has a "safety box" built in her own room for the temporary keeping of money and small articles of value. The box is sunken beneath the floor, and has a cover moved by a secret spring; a corner of the rug still further conceals its unnoticeable opening. In another house there is a similar cache at one end of a window-box built with panels; in this case a panel pushes back, revealing the opening which is further reinforced with a lock on an inner door. The bottom stair also provides an excellent hiding-place, accessible in a number of practical ways. In an old-fashioned house, having fireplaces with paneled walls, there are a number of tiny compartments reached through sliding panels.

Of course these safety boxes are not fireproof, and would doubtless be discernable to a lengthy and professional search, but for the ordinary instances of hasty ransacking of houses by sneak thieves or unreliable servants they offer absolute protection. ALICE M. ASHTON

Renewing Burlap

THE floors of the rented house in which we live are too poor to be used uncovered with rugs, so we put down a dull green art burlap for the edges. After a year's use, this was so faded as to be unfit for use. After cleaning the burlap and tacking it securely in place, I went over it with a green dye of the desired shade, using a wide paint brush for the purpose. When this had dried we found our burlap better than it had ever been before, as the wetting caused it to shrink a little, and it became smooth and tight and easy to sweep. A good, serviceable dye can be purchased for this use which will hold its color fresh and unfaded for a considerable time. A. M. A.

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The Best Use of Stone Work

(*Continued from page* 39)

will be fully convinced that the keynote of the successful treatment of stonework is naturalness and simplicity, as opposed to distortion and labored artificiality.

Almost as objectionable as the "hammer dressed" rubble distortion is the wall faced with squared pitch-faced stone. By "pitch-faced" masonry we mean that in which the face of the stones is roughly dressed so as to make the front of the horizontal joint a straight line. It is used for work when a rugged appearance is desired without the extreme roughness of quarry-faced masonry. The illustration shows the side wall of a foolish little two-story building built of pitch-faced chunks of the sort of granite that is used in bridge piers or large buildings. The style is stilted and awkward in appearance, and has nothing to recommend it.

One of the best examples of a simply built quarry-faced coursed rubble wall, is shown in one of the accompanying illustrations. The courses are not more than six to eight inches in height. The color effect of the iron-stained, untooled stone is excellent.

Another commendable feature of Colonial masonry was that native stone was perforce employed. The propriety of using the materials nature afforded on the spot, thereby securing harmony with local conditions, cannot be questioned. It avoided any jarring note of far-fetched ostentation.

Masonry, of course, should be adapted to the type or purpose of the building. For the modest country place no more consistent style of stonework can be found than the Colonial. It is unpretentious and thoroughly honest. Not many of us are multi-millionaires who can afford to build palatial seats such as have sprung up in some parts of the country, but great numbers can and do build cheerful, unostentatious, livable homes. For homes such as these, Colonial masonry is thoroughly in keeping. This paper aims in no way to decry the use of other styles of masonry in the proper place, but only advocates the faithful adherence to Colonial principles where they are manifestly suitable. It is only a plea for sanity and simplicity, and avoidance of fantastic conspicuousness. For great country seats, for large town houses, for public buildings of any sort, carefully cut and imported stone is a necessity, and masonry of Colonial type would be painfully incongruous. Finally, the element of cheapness, insured by using what is near at hand, is not to be despised.

A few words of caution to the intending homebuilder will not be out of place. Study the stonework around you and elsewhere before you build, and take time to make up your mind as to exactly what you wish. Insist that the architect show you in his drawings exactly the appearance of the masonry to be stipulated in the specifications. Then, when all else is decided, watch the builders like a hawk, not trust-

ing too much to the vigilance of the architect. He is only human, and also has much other work to do, and, as you are the most deeply interested person, it is to be expected you should be the most watchful. Finally, insist that the stones be laid on their "natural bed," that is to say, the strata lying horizontally, as usually found in the quarry. If you do not do this, you will rue the oversight when some of the stones begin to weather badly.

The Real Meaning and Use of Architectural Detail

(*Continued from page 37*)

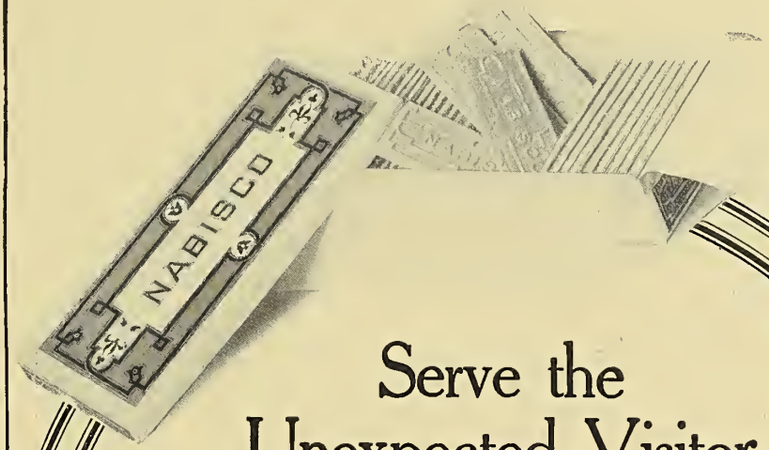
A form of applied decoration that is very common and extremely characteristic was the use of ornament in panels under a mantel-shelf, either over pilasters or columns, or in a center panel in the frieze. This was made of *papier-maché*, and a number of well-defined motives were in common use. In the narrow panel above a pilaster a vase or urn, either with or without flowers, was sometimes used—more often it was a sheaf of wheat or a pineapple. These two forms were especially popular with the Colonial builder. It is difficult to imagine why such a fruit as the pineapple, which must have been very rare in Colonial days, should have taken so prominent a place as a decorative motive, but it was to be found both in relief and as a free-standing ornament on gate posts in "broken" pediments, as in the Brown House at Salem, and even on the newel-posts of a stairway. This example at the Brown House is, so far as I know, unique in its realism. The pineapple was usually severely conventionalized, and usually had more the form of an acorn than of the real fruit.

In the panels in the centre of a mantel there were many motives in use. The eagle was common, but often the decoration was in the form of a pastoral scene in rather low relief, and sometimes it was a bit of mythology.

In the stairways the Colonial designer usually spread himself. The balusters were often turned in intricate twisted shapes, with several varieties used in the same stair, and the ends of the steps were decorated with a sort of bracket form which had great decorative value.

In all these forms the designer was influenced very strongly by the precedent of his surroundings, and one does not find originality, so much as a careful striving for refinement, in the use of the detail, and a fine sense of the fact that he was building in wood. As a result, both the moldings and the detail have a rather thin, attenuated character, which is most appropriate to the material.

If one wishes to reproduce the character of a Colonial house, it is necessary to follow carefully the forms and motives which were actually used in the old work, and to stick very closely to precedent. I know of one architect, famous for his Colonial houses, who does not attempt to design his moldings, but who has a box of examples



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of the old work which he has rescued from houses that were being torn down; and when a molding is to be detailed, the designer goes to the box and picks out a good one, which is accurately followed in the building. The result is that this architect's work has all of the charm of the old work. Of course, this method might easily lead to the most absurd results without a very intimate knowledge of the style and a well-developed sense of fitness.

A Setting for the Country Home

(*Continued from page* 30)

homestead without having in mind an abundant supply of food for song birds, our allies in fighting insects. Barberries are good for this purpose, as are also the berries of the beautiful wild cherry and mulberry trees.

Now you comprehend, I think, my idea of lawns as something nicely adjusted to the needs of the people, and the birds, and the bees—not simply as conventional plantations of costly trees. Nor does a lawn consist of a smoothly shaved plot of grass. Grasses are all beautiful, and quite as beautiful when waving in the wind as when sheared close to the ground. A good country lawn should be mowed three or four times a year, with a scythe. At the same time do not get it into your head that every dandelion must be picked out, and every other little wild beauty dug out. Leave the little fussy lawns to crowded cities, where nothing simpler, sweeter and more homelike can be afforded.

Lighting Fixtures of Character

(*Continued from page* 23)

some points of individual taste, however, that should be considered in connection with the furniture arrangement. For instance, the boudoir, dressing-room and bathroom should have fixtures convenient for completing the toilet. It is often found that the chiffonier or dressing-table cannot be placed in proper relation to the wall brackets, or that the shaving mirror is always in the dark. Besides these considerations, there is the problem of embarrassing shadows on the window shades. These are some of the difficulties that, if taken care of beforehand, save untold trouble, disappointment, and annoyance later on.

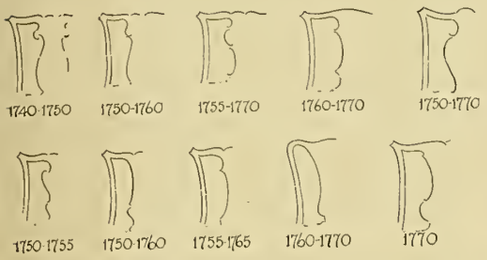
What the Period Styles Really Are

(*Continued from page* 18)

those they have designed have much beauty of line. Robert Adam was one of the first to assemble the pieces that later grew into the sideboard—a table, two pedestals, and a cellaret. There is a sideboard designed by him for Gillows, in which the parts are connected, and it is at least one of the ancestors of the beautiful Shearer and Hepplewhite ones and our modern useful, though not always beautiful, article.

Shearer's furniture was simple and dainty in design, and he has the honor of

making the first real serpentine sideboard, about 1780, which was not a more or less disconnected collection of tables and pedestals. It was the forerunner of the Hepplewhite and Sheraton sideboards that we know so well. Shearer is now hardly known even by name to the general world, but without doubt his ideal of lightness and strength in construction had a good deal of influence on his contemporaries and followers.





The different combinations of "C" curves and cyma curves that help one to date Chippendale chairs. The first figure shows the familiar curved top that is so characteristic of Chippendale's earliest work. Most of these early backs were fitted with cabriole legs. The growing influence of the French styles is shown in the third column. At this time the ribbon-back chair, which he elaborated to such an extent, developed. Although the Gothic and Chinese designs, and the various ladder-back forms (shown in the last sketch), are found from 1760-70, these drawings show the growing tendency toward restraint and simplicity which marked the later years. These are but the merest suggestions of splat outlines and curves, but they show the most common variations of design

The transition from Chippendale to Hepplewhite, about 1780-1790, was not sudden, as the last style of Chippendale was simpler and had more of the classic feeling in it. Hepplewhite says, in the preface to his book: "To unite elegance and utility, and blend the useful with the agreeable, has ever been considered a difficult but an honorable task." He sometimes failed and sometimes succeeded. His knowledge of construction enabled him to make his chairs with shield, oval, and heart-shaped backs. The tops were slightly curved, also the tops of the slats, and at the lower edge where the back and the splat join, a half rosette was carved. He used straight or tapering legs with spade feet for his furniture, often inlaid with bellflowers in satinwood. The legs were sometimes carved with a double ogee curve and bead molding. The upholstery was fastened to the chairs with brass-headed tacks, often in a festoon pattern. Oval-shaped brass handles were used on his bureaus, desks, and other furniture. He did not use much carving, but used inlay of satinwood, etc., oval panels, lines, urns, and many other motives common to the other cabinet-makers of the day. He made many sideboards, some, in fact, going back to the side table and pedestal idea, and bottle-cases and knife-boxes were put on



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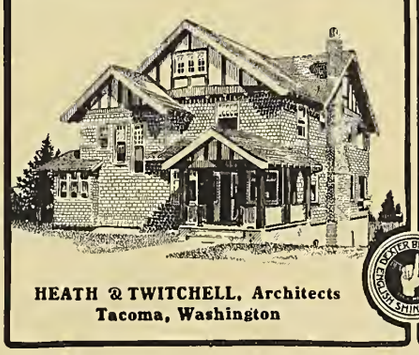
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Boston, Mass., 232 Summer Street
Indianapolis, Ind., 207-209 South Meridian Street
London, England, 13-15 Southampton Row
Spokane, Wash., 163 South Lincoln Street

the ends of the sideboards. The urn-shaped knife-cases were especially beautiful. The large pieces of furniture, such as highboys, chests-of-drawers, and wash-stands, changed very little from those made in the day of Chippendale, and retained much of their heaviness of design. The best work of Hepplewhite & Co. was done between 1785-1795.

Thomas Sheraton was born in 1750, and was a journeyman cabinet-maker when he went to London. His great genius for furniture design was combined with a love of writing tracts and sermons, and he also published a book on furniture called the "Drawing Book." Unfortunately for his success in life, he had a most disagreeable personality, being conceited, jealous, and perfectly willing to pour scorn on his brother cabinet-makers. This impression he quite frankly gives about himself in his books. The name of Robert Adam is not mentioned, and this seems particularly unpleasant when one thinks of the latter's undoubted influence on Sheraton's work. Sheraton's unfortunate disposition probably helped to make his life a failure, and when he died he left his family in very poor circumstances. There is no doubt, however, that he designed most beautiful furniture, although much of the work attributed to him may have been done by Shearer and others. His influence was so great that it has at least given his name to a very beautiful period of furniture.

Sheraton's chair backs are rectangular in design, with urn splats, and splats divided into seven radiates, and also many other designs. The legs for his furniture were at first plain, and then tapering and reeded. He used some carving, and a great deal of stainwood and tulipwood were inlaid in the mahogany; he also used rosewood. The bellflower, urn, festoons, and acanthus were all favorites of his for the decoration. Sheraton's list of articles of furniture is long, for he made almost everything from knife-boxes to "chamber-horses," which were contrivances of a saddle and springs for people to take exercise upon at home. His sideboards, card-tables, sewing-tables, tables of every kind, chairs—in fact, everything he made during his best period—have a sureness and beauty of line that makes it doubly sad that through the stress of circumstances he should have deserted it for the style of the Empire that was then the fashion in France. Some of his Empire designs have much beauty, while others are too dreadful, but it was the beginning of the end, and the nineteenth century saw the beautiful principles of the eighteenth century lost in a bog of ugliness.

There were many other cabinet-makers of merit that space does not allow me to mention, but the great four who stood head and shoulders above them all were Chippendale, Adam, Hepplewhite and Sheraton. They, being human, did much work that is best forgotten, but the heights to which they all rose have set a standard for English furniture in beauty and construction that it would be well to keep in mind.

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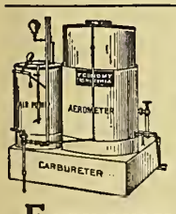
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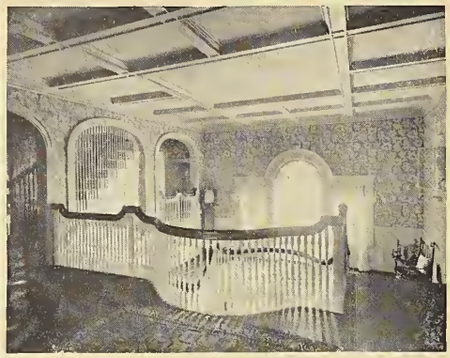
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Under this heading is appearing a series of letters containing advice on the interior finish, decoration and furnishing of the Modern Home. These will be found full of helpful and practical suggestions.

Any questions pertaining to the above addressed to Margaret Greenleaf, Consulting Decorator for Murphy Varnish Company, will receive prompt attention.

LETTER NO. 3

This bit of a Colonial interior is full of good suggestions to the prospective builder. The Palladian window, the spindle screen on the stair and balustrade with hand rail of mahogany are details which are characteristic and beautiful. The ivory enamel of the standing woodwork is in delightful contrast with the two toned blue of the wall covering. The dignity and stateliness of a pure Colonial interior provides a perfect setting for fine old mahogany and early Georgian furniture, and to the owner of taste and discretion there is much pleasure to be found in the assembling of such pieces in rooms of this type.

The beautiful satin-like surface of the enamel made by Murphy Varnish Company will be found to give the highest satisfaction. The tone, the finish and the lasting qualities of their goods are unsurpassed, and as the standing woodwork of a Colonial interior is its most characteristic asset the right material must be used to obtain the right result.

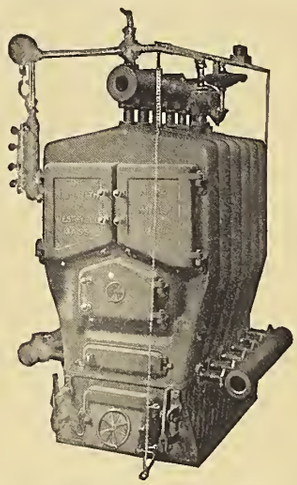
It costs no more to apply these than a cheaper grade of material which will require early renewal if not removal.

Write for sample panels showing these finishes, and if you decide (as you will on seeing them) to become a customer of the Company, you are entitled to the full service of the Department of Decoration, which includes suggestions and samples of wall covering and drapery materials, cuts of fixtures, furniture and rugs. The scheme sent you will be made up for your house and is not a stock scheme.

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The Fireproof House

(*Continued from page* 15)

tration on the top of page 15). In these channels between the rows are laid twisted iron rods, and over these is poured concrete. When the temporary support is taken away the result is a series of reinforced concrete beams supporting the tiles between them. On this may be laid any sort of a finished floor—either of tiles or of wood on "sleepers."

In regard to the matter of the fireproof roof, it must be admitted that the expense of a form of construction requiring reinforced concrete beams, with tile in between, adds very largely to the cost of the house. Ordinarily it would be considered sufficient protection to build the roof construction of wood, as shown in the detail, covering the rafters with boards on which are laid either slate or roofing tiles. This would prevent any damage from fire by sparks falling on the outside, and on account of the exceedingly tight construction of a house of this kind, there is very little chance of a fire starting from the attic. For the flames to gain any headway at all they must be fed from below by a good draft, which, of course, is easily prevented in this type of building.

The cost of a hollow tile house is about 15 per cent. higher than that of first-class wood construction, where the new material is readily obtainable and where the workmen are familiar with its use. The increased cost is not large when one takes into consideration the fact that the cost of maintenance is almost nothing, and in the country districts, where the fire risk is great, the cost of insurance is far less. In addition to these considerations, there are those of endurance and stability. The wooden houses of Colonial days lasted for many years, but they were built exceptionally well. Those of today will not measure up to the same standard. With a fireproof house, however, we are building for generations, in addition to having the feeling of security that comes only with a complete protection from the dangers of fire.

Protecting the Owner In His Specifications

BY CHARLES K. FARRINGTON

THERE should be in every set of specifications some clauses protecting the owner against loss in case of damage done to work already finished by one contractor, which may be injured by the fault of another. Such instances are constantly happening, and to have oneself thoroughly protected from all needless expense or worry is good, indeed. The following examples may be considered typical of many which could also have been given if it were not for lack of space.

A gutter had been placed in position, but had not been "accepted" by the architect, because it was only a part of the

(*Continued on page* 58)

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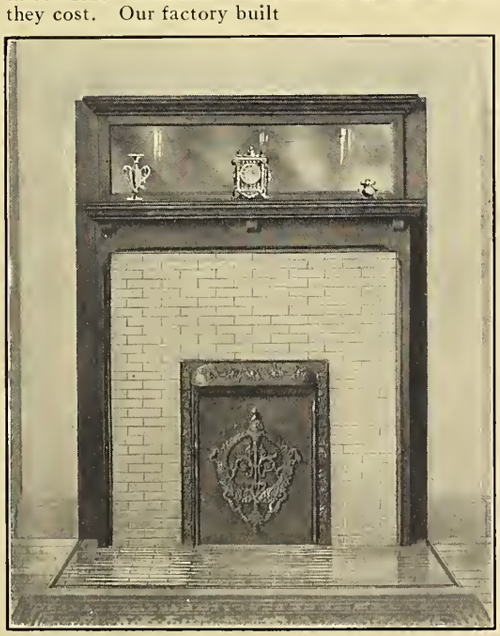
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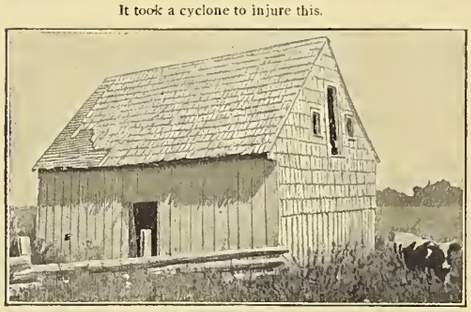
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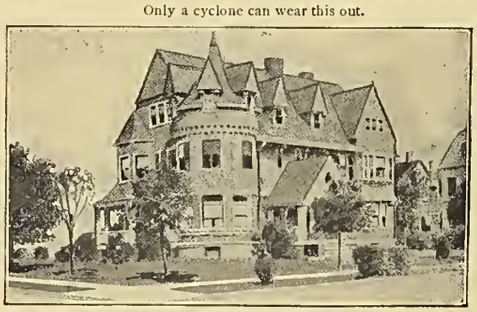
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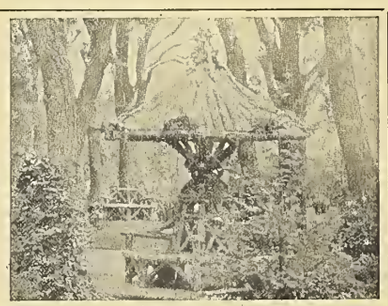
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(*Continued from page* 56)

work being done by the plumbing contractor, who had more work on other parts of the building still to be finished before a payment was due. Another contractor's men accidentally allowed a heavy ladder, used for other work on the roof, to drop and seriously damage this gutter. At once the question of responsibility for the injury came up. The plumbing contractor claimed that he had finished the gutter according to the specifications, and had left it in good order, and so could not be in any way held responsible. The owner stated that the work had not been "accepted" by the architect, therefore he was also not responsible. The contractor, whose men caused the damage, said he could not settle for it. All parties were placed in a most uncomfortable position. If the specifications had contained a clause such as was mentioned at the beginning of this article, in all probability the occurrence would never have taken place, as greater care would have been taken by all employed about the building. A box marked "Glass, handle with care," usually, if not always, is handled with greater care than one not so marked. Plan your contracts to provide for these contingencies.

Another case, similar in some respects, took place in a house heated by a furnace still under construction. This was for the completion of some work, which could only be done if the house was partially warm. The contractor doing the work had his men build the fire in the heater. It went out unexpectedly during the night, and the water pipes froze and burst, flooding the upper story with water and damaging some of the ceilings. Again came the need of determining the responsibility for the damage. The mason wanted damages for the plastered work which had to be replaced; the plumber wished to be reimbursed for the piping, and the owner wanted to know why he should be held responsible for what was not his fault. A point is sometimes made in such instances, that as the heater is being used for the owner's *benefit*, it is being used at the owner's *risk;* in other words, if there is not a clause protecting him in the specifications, he is expected to assume all risks of this kind. It is obvious that this is unfair to him, and he should insist that the architect shall fully protect him when he draws up the contracts and specifications. If such cases are taken to the courts it will prove expensive and troublesome, and as the owner is the most interested party, no matter how the case may be decided, it is usually less expensive if he is unprotected not to sue, but simply to settle for the damages himself. He will probably save money in the end, for the expenses consequent to a law suit are heavy, and he will be prevented from finishing and entering the home as soon as he otherwise could. Such difficulties are very easily settled by the "grain of prevention" taken beforehand.

Even if you are protected by one or more

(*Continued on page* 60)

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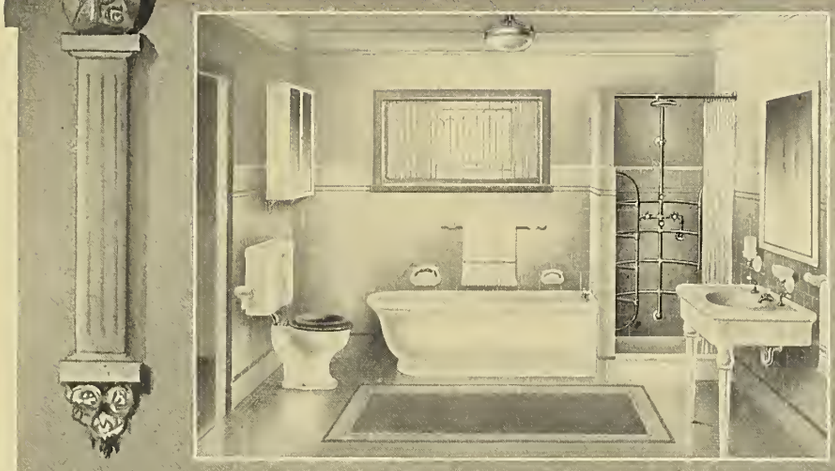


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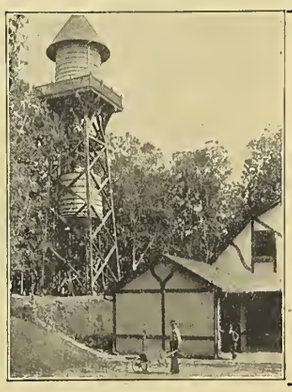
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(*Continued from page* 58)

saving clauses, in a case similar to the one just mentioned, it is best to have some competent man engaged to look after the fire when it is necessary to have one, rather than put one's trust in any contractor's men. It should be remembered in this connection that the workmen are only at the building five days a week, from eight o'clock to five o'clock; Saturdays from eight to twelve, and Sundays not at all, and that it is very difficult for them to attend properly to any fire in the heater.

But while mentioning such instances, I must say that if the owner is only willing to be put to some trouble, he can do much towards securing a well-built home by going frequently to the building and watching how it is being constructed. It is, of course, impossible for the architect to be about the house at all times, and such assistance as many an owner can give by frequent and systematic visits to the dwelling is very valuable. For example, the writer knows of a house which was being constructed, and certain of the workmen built a fire in one of the chimney fireplaces in order to warm the room in which they were working. The hearth-stone had not been set, nor had a proper grate been placed in position, so their action was a dangerous one. The owner of this building had been in the habit of making a visit to the house after returning from business each evening, and coming as usual, just before dusk, he discovered the fire burning brightly and in danger of setting fire to the house, as a high wind which had suddenly come up, was scattering the burning embers over the floor. Such instances should also lead the owner to be sure the property is insured *while* the house is being built. In the case just referred to the owner's lease of a rented house expired at about the time his house was expected to be finished. Even if this house had been insured the expense and trouble to this owner would have been very serious had it not been for his frequent visits. Such an occurrence is likely to cause unforeseen complications, and it is far better to take every precaution when you begin to build.

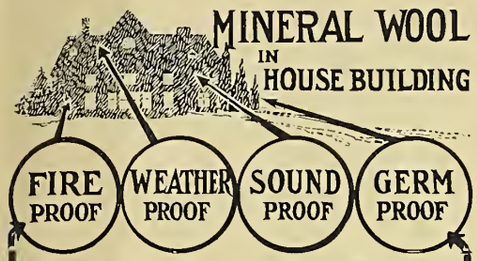
Book Reviews

[*The Publishers of House and Garden will be glad to furnish any books desired by subscribers on receipt of publisher's price. Inquiries accompanied by stamp for reply will be answered immediately.*]

Landscape Gardening Studies. By Samuel Parsons. Cloth, 8vo, 98 pp. and index. Illustrated. New York, 1910: John Lane Company. $2 net. Postage 20c.

A book for those who are interested in the larger problems of landscape gardening, particularly as applied to public parks, playgrounds, etc. The volume presents chiefly the author's own undertakings along many lines and the text shows what was done and why in each case.

(*Continued on page* 62)



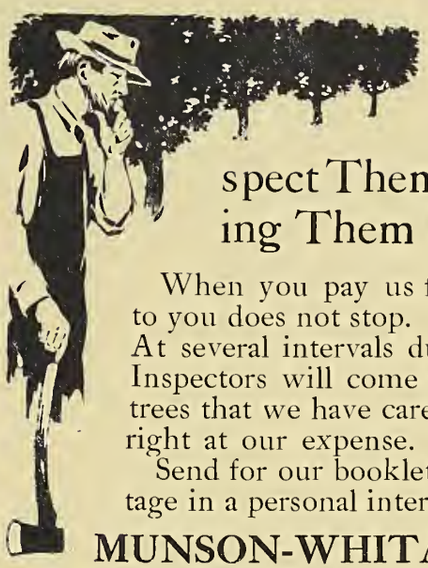
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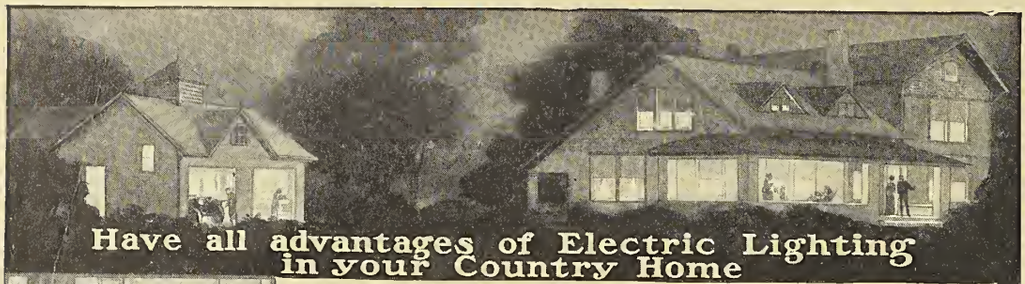
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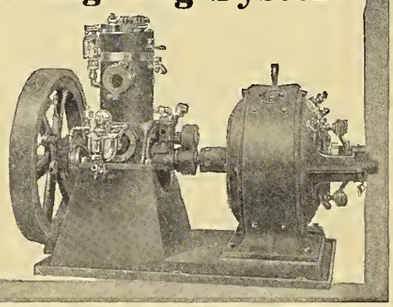
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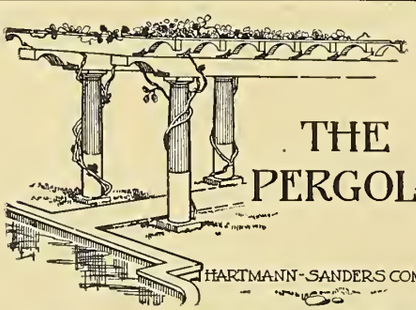
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(*Continued from page 60*)

Design in Theory and Practice. By Ernest A. Batchelder, author of "Principles of Design." Cloth, gilt top, 8vo, 268 pp. and index. New York, 1910: The Macmillan Company. $1.75 net.

Mr. Batchelder is too well and widely known as an authority on the principles of design to need an introduction. He does not attempt in this book, parts of which have appeared in a series of magazine articles in *The Craftsman,* to formulate a system or method for teaching design. The aim is, on the other hand, to present a few of the many problems that have gradually developed in his experience in teaching and practice. Among the chapter headings are Elementary Esthetic Principles, Constructive Designing, Materials, Tools and Processes, Refinement of Proportions, The Play Impulse, etc. The author purposely omits a discussion of color, owing to the many difficulties met with in attempting to convey precise meaning on this subject.

On the Making of Gardens. By Sir George Stilwell. Cloth, 16mo, 109 pp. London: John Murray, 5s. net.

To many excellent people who take a gloomy view of life, studies of art and beauty seem but trifling, but no one can fail to take delight in this fine essay intended, if one may guess the author's purpose, to influence the newly recovered art of garden design. As the author says in his preface, if the world is to make great gardens again, we must both discover and apply in the changed circumstances of modern life the principles which guided the garden-maker of the Renaissance. Sir George Stilwell has brought forth these principles admirably. Moreover the volume is one that will hold the reader's interest whether he own a garden or not or whether or not he ever hopes to own one. An ideal book as a gift to a garden-lover.

The Rural Life Problem of the United States. Notes of an Irish observer. By Sir Horace Plunkett. Cloth, gilt top, 8vo, 174 pp. New York: The Macmillan Company. $1.25 net.

America, as to many another Irishman, has been a second home to the author of this book, the substance of which appeared in five articles contributed to *The Outlook* under the title "Conservation and Rural Life," where they attracted much attention. Of course the matter is from Sir Horace Plunkett's point of view, but as a broad-minded student of economics and with thirty years of experienced observations, that point of view cannot but have a peculiar value. The author discusses the inner life of the American farmer, the weak spot in American rural economy, and other interesting topics of vital importance.

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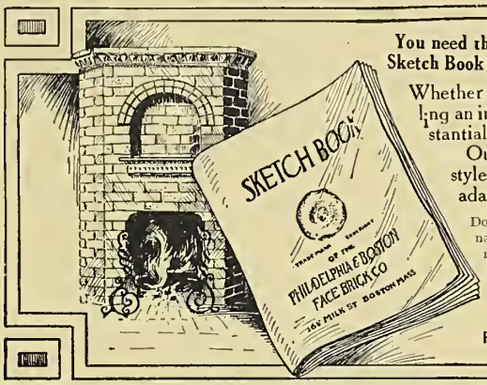
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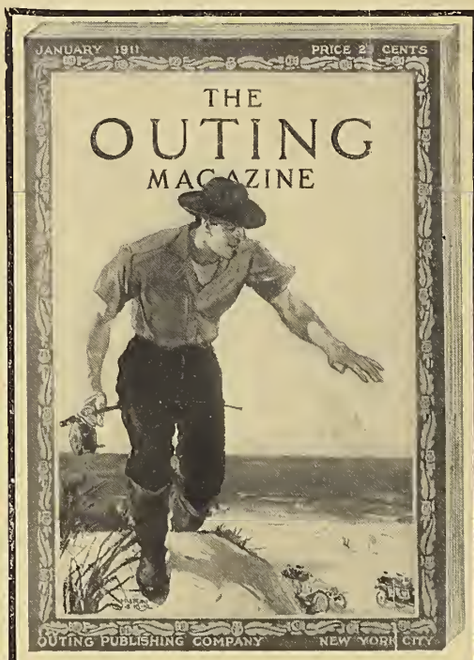


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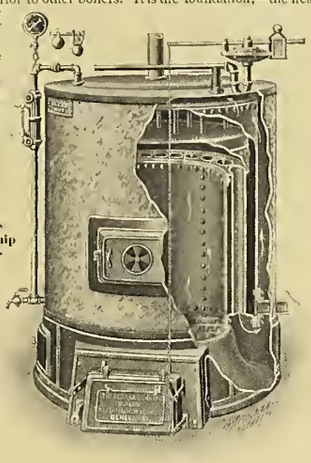
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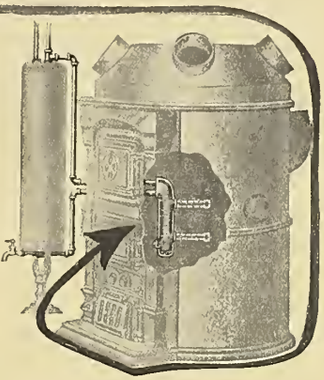
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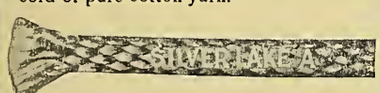
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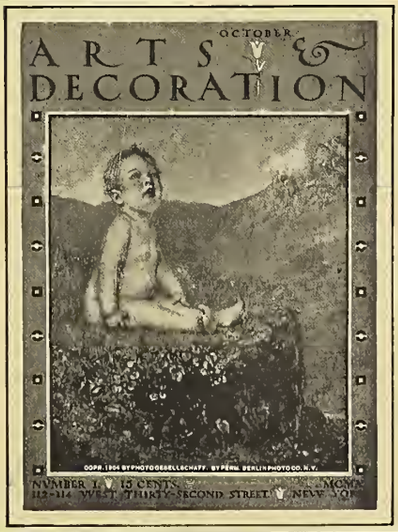
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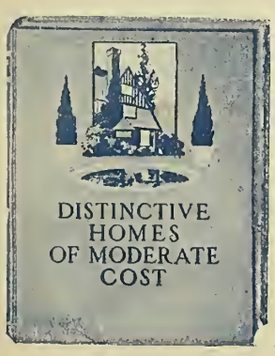
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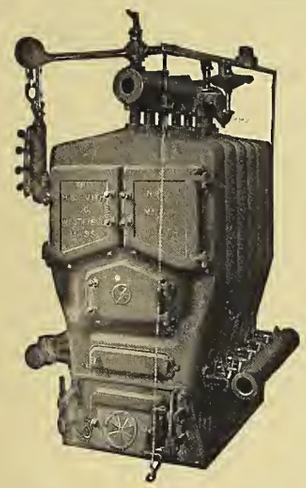
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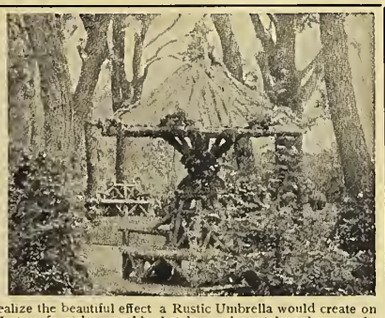
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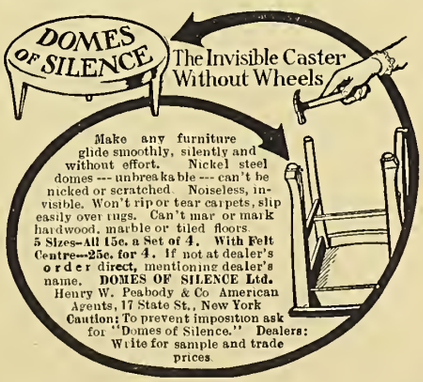
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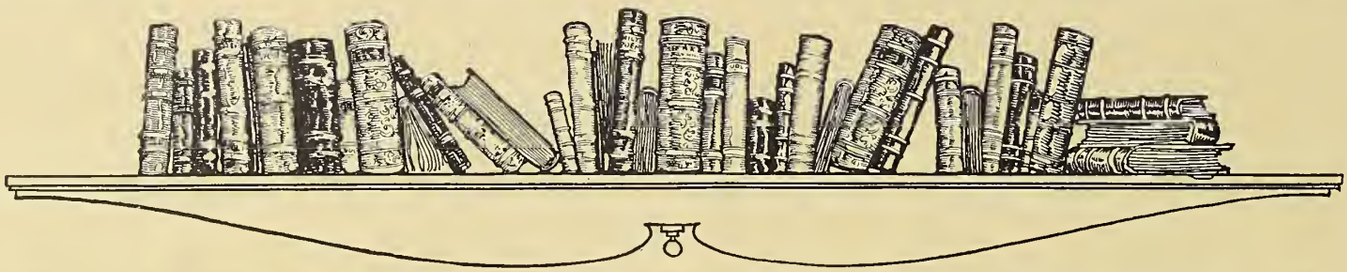
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LAST year about this time, you may remember, there was a great cry from Washington that the postal deficit had become alarmingly great. Mr. Hitchcock, the Postmaster-General, blamed the second-class mail matter department for most of this, and urged mail matter department for most of this, and urged the raising of the rate. The great body of magazine readers objected strenuously, for the additional burden must necessarily fall upon them — in any business the delivery charges fall eventually upon the consumer. So the Postmaster-General began to look a bit further into the matter. As a result of his first year's "looking," he saved about eleven millions of that deficit, bringing it down to about seven millions for the past year. And that without tampering with the existing postal rates on magazines! Eleven million dollars — about ten cents for every man, woman and child in the Union. If the deficit could be more than cut in two by merely "looking into the matter," it could be wiped out completely by an intelligent systematizing of the Post Office business without making the magazines bear the burden.

Mr. Hitchcock comes forward again with a new scheme of raising the price of delivering magazines. He says: Let us charge a higher rate of postage on the *advertising pages* of the magazines [letting the newspapers continue at the old flat rate of one cent a pound, advertising and all] but let us retain the existing rate on the *text pages*.

Was there ever such a thoroughly ridiculous proposition put forth by a business man? It is as if your grocer came to you and said, "Now I can no longer afford to send home your groceries at the price you are paying me for the various items; I'll not charge you for carrying them home, though; there will merely be a charge of twenty-five cents for the basket each time." According to the Postmaster-General's scheme, a copy of each issue of each magazine would have to be taken to the local postmaster before the date of publication and there cut apart, advertising pages on one scale, text pages on another, to determine the price of mailing. Can you imagine a more effective stick to thrust in the revolving wheels of the publishing and post-office business?

When a business man finds that his business, although large in volume, is showing a deficit, what is his first move? Does he immediately raise his prices, thereby scaring off a large part of his trade? Or does he look to his cost of production, to his contracts with supply houses, to his transportation cost?

Now Mr. Hitchcock knows very little indeed about his *costs* — he says so himself. Any Congressman can frank a piano or a white elephant through the mails — and does, but Mr. Hitchcock doesn't know just how much that costs the Government. He can, however, see with half an eye that an effectual method of wiping out that deficit is to raise his prices, which, in the absence of all competition, would have to be paid.

How many thousands of copies of the Congressional Record are distributed to people who drop them regularly, without removing the wrappers, into the waste-basket? How many tons of seeds are received by the constituents of Congressmen — seeds that in many cases are useless to the recipient and do not advance in any way the agricultural prosperity of the country? Why shouldn't these articles be taxed for postage instead of making the publisher — the *magazine* publisher — pay the cost? If a man really wants the Congressional Record, let him pay the postage — it might amount to twenty-five cents a year. If there is any reason why the Congressman should be able to oblige his friends with flower seeds, let him dig down into his pocket for the cent or two necessary to send them.

What are *you* going to do about it? You have the power to say to this manager of a corporation in which you are a stockholder and a director: "I must insist on a thorough investigation into your cost of production before you raise a rate that I myself will eventually have to pay."

Had you not better say it—now? Write to your Congressman today; get your neighbor and your neighbor's wife to write tomorrow. Tell your Senator what you think of this matter; use a dozen stamps on Congress this week. Congress sits up and listens when the public speaks.



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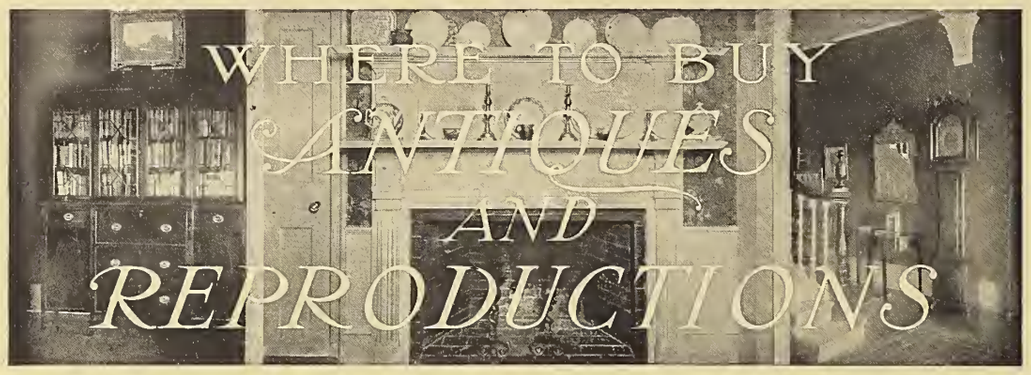
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There is illustrated in colors a Handsome Carriage Wrap and as a special feature a full page portrait beautifully colored of Miss Frances Starr, the well known actress. The cover of this number printed in four colors, showing a handsome reception gown and surrounded with a beautiful gold border completes the artistic presentment of fashions for the Spring wardrobe.

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The Hunt for the Antique

Russian brass and copper ware, used as decoration, have become familiar of late years. Long necked brass jugs, of no practical use, and two-handled loving cups, are seen on mantelpieces almost as frequently as are casts of the famous Barye lion. Antique tea trays, tea kettles and other useful articles are less often seen. As bought in the ordinary shop, this foreign metal work is limited in variety and expensive. If, however, the explorer of curious nooks ventures into a swarming East Side district of New York, inhabited chiefly by Russians and Poles, a dark, narrow street is discovered, lined with tiny basement shops devoted to the sale of copper, brass and pewter. Prices are about one-half below the ordinary uptown prices, and there is a bewildering variety of glittering wares from which to choose. Below the shops are dark cellars where new pieces are turned out by Russian craftsmen, and much of the ware is lacquered or polished by machinery until old and new are nearly alike. In one or two of the shops pieces are to be found as they came from immigrant homes or from the Custom House store of confiscated articles. Covered with verdigris and discolored through neglect, they look unpromising enough. But if care is taken to select by weight and to make sure that no holes or cracks mar the metal, interesting pieces with who knows what dramatic history may be picked up at small cost by those who prefer the genuine, old surface of the metal to a newly manufactured one.

The cleaning of the brass thus acquired is, of course, not easy. A brisk rubbing with salt and vinegar removes most of the verdigris and deposit. A brass cleaner must be used to finish the polishing, a process rewarded by the discovery of the old hand-wrought surface. It is noticeable in buying trays that the unrestored ones are usually without handles. In the polished tray the handles are frequently modern additions, cast, and of poor design.

If one is fortunate enough to find an old copper tea kettle, small and of graceful shape, untouched by the restorer, it can be made ready for use at afternoon teas with little trouble, as washing with hot soapsuds cleans the surface without impairing the beautiful shadowy bloom acquired by years of service. It should also be boiled for at least twenty minutes in a kettleful of water to destroy probable germs.

A recent find in the metal work street was toys of brass. Prancing horses, kneeling camels, and elephants cast in two pieces, are covered with hieroglyphics. Rings in their noses permit them to be dragged around by the infant that possesses them, and the horse has a rat-like tail that can be switched in delightful fashion.

To the few who wish to buy at moderate cost not merely decorations, but useful

articles for the home that are also beautiful, these metal work shops are a source of supply and an interesting hunting ground. L. A. S.

Care of the Cocker Spaniel

As I have been interested in the answers you have given correspondents in your columns, I take the liberty of asking you these questions about a cocker spaniel. He is four years old, and until a few weeks ago has been rather fat. Now he is much thinner—has much exercise and seems to stand it very well. But his hair is not in good condition. It is dull and not curly. And he has great discomfort from fleas. He is fed twice in twenty-four hours—a little meat and a little potato and green vegetables—and several times a week, a bone. Except for his hair and the itching, he seems very fit. Is there any average weight he should have? Do you think the feeding too much or too little? Please tell me what to do to improve his hair and rid him of the fleas.
M. L. K.

Try a vermifuge on your dog, as worm trouble may be expected.

A good remedy for fleas is not difficult to find, and your dealer should have one that is effective. Use this regularly and see that it is not merely superficially shaken on. After application of flea powder carefully wash the skin with soap and warm water. If the coat be in poor condition, rub in cod liver oil, after which your dog should be wrapped in cotton cloth. Groom him every day, and after washing, the hair should be rubbed vigorously with the hands for an hour. This will give the coat the desired gloss.

A Cocker's coat should be abundant, soft and silky, straight or wavy, but *not* curled.

Give a light breakfast of milk and beaten eggs (nutritious and fattening) and a heavy meal of well-cooked meat, bread, oatmeal, vegetables, etc., at night—meals to be at regular hours each day. Vary the diet daily—table scraps are always relished. Don't fear to give enough meat.

Cockers need regular exercise and plenty of it.

The weight of a Cocker should be between 18 and 28 pounds.

Don't Overfeed Your Dog

The great trouble with the ordinary house-dog is that he is over-fed. One good meal a day, in the early evening, is best for an adult dog (feed young puppies often), preceded in the morning by a light meal. A fat dog is a monstrosity, neither useful nor ornamental. Most dogs begin to show the wear and tear of life, the oncoming of old age, at about the eighth year. They then take it easy to the end, which may be some three or four or more years later.

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J. A.

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and prices higher, yet there are scattered over the land the wrecks of small fortunes that were invested in the chicken business, and the lugubrious faces of the luckless investors bear eloquent testimony to the folly of putting one's money into the business to learn the business.

On the other hand, there are flourishing poultry plants from which the owners are making comfortable fortunes, but invariably these owners had learned to know hens before expanding.

If you are new to the business and have three hundred dollars to invest in it, put it in the safest place you know of and go to work under some man who is making it pay. Or, set to work with a dozen hens of your own and try to make them pay you a profit. At the end of the year you will have your money and the knowledge wherewith to make the best use of it.

These remarks are not meant to discourage you. It costs a trifle over one-quarter of a cent each day to provide a hen with laying food, and less than fifty cents to raise her to the laying age. Fresh eggs bring high prices of late years and, therefore, according to the theory of all and the practice of the successful few, poultry raising is a profitable means of livelihood. But some hens lay two hundred and fifty eggs a year, others fifty, and still others none at all. Then invested capital can go by way of weak, debilitated stock, unsanitary conditions, disease, etc. These are the hindrances that one must study to eliminate before he can realize a profit and these can be studied under some one else as well as at your own risk.

When you have acquired the knowledge, there are two ways of starting: One is to buy year-old hens and cockerels, realize what you can from eggs, select the best layers as breeders and hatch your stock from their eggs. This method requires more capital than the succeeding method and is best adapted to fall. The other is to start with eggs and incubators in the spring. This necessitates brooding the young chicks.

With a capital of three hundred dollars you can expend fifty dollars for a house, fifty dollars for two incubators, each of two-hundred-egg capacity, and seventeen dollars for one brooder of four-hundred-chick capacity. (A four-hundred-egg incubator is cheaper to heat than two smaller ones, but if anything goes amiss the whole hatch is jeopardized.) Forty dollars more for eggs, leaves a balance to be expended for feed and later incidentals.

By starting the incubators about March 10th, you will have a hatching about March 31st, and if you start them again about April 2d, by April 23d there should be a satisfactory total of young chicks as a beginning.

If from this you have, say, six hundred chicks, about half will be cockerels which should be sold as broilers at six weeks, netting you over fifty dollars. Of your three hundred pullets you would have an excellent laying stock.

Now as to housing; the object is to get

warmth, light and sufficient room at a minimum of expense. If you dispense with a foundation and support the building on posts as so many poultry men do, you must have a double floor interlined with tarred or asphalt roofing paper. This should also line the back and sides and cover the roof, making a very warm house. Plenty of sunlight is essential and you need not pass it through glass. Instead, use muslin-covered frames at the windows, admitting pure air through the night and opened wide during the day. Your house will serve you as a brooder house during the first spring and for adult fowls next year. A house ten feet wide and fifty feet long will house three hundred laying hens. At first I would advise building a house ten feet wide, fifteen feet long and five and one-half feet high, with single-pitched roof and facing toward the south. In the fall, thirty-five feet more of building can be added to accommodate the fowls if all goes well. In summer, with proper pens, so much house room is unnecessary, but it is necessary for laying hens in winter when cold, snow-covered ground would curtail laying. Allow the birds free range of the interior.

Discriminate in your choice of stock. One naturally turns to thoroughbreds. Thoroughbred stock is right when not inbred or bred out of all profitable characteristics.

If an egg plant is your aim, Leghorns will serve you well, but Wyandottes, Plymouth Rocks or other medium-weight birds will enable you to dispose of your surplus cockerels at a larger profit. If you learn to select the layers you can work them up to a high degree of egg production. A number of poultrymen are making good with Rhode Island Reds.

Green food, nitrogenous food, grit, shell, charcoal and fresh water must be regularly supplied the fowls. Confined fowls must have clean litter always, and absolute cleanliness must prevail in every other detail.

M. ROBERTS CONOVER.

Two Hints for Chicks

A good kind of coop is one which permits the chicks to run at large in good weather, while the hen is restrained in the small wire run attached. The little chicks do no harm to flower or vegetable garden, but really are of great benefit, by consuming prodigious quantities of insect life of every description.

The food of the chicks raised with a hen is exceedingly simple. Many of the brands of commercial chick foods are entirely satisfactory. A most excellent food can be mixed at home, by taking equal parts of oatmeal, hominy grits and cracked wheat. Chick-size grit, oyster shell and charcoal, as well as water, should be in reach. After the chicks are part grown, say a pound in weight, any grain ration, with table scraps, and plenty of green stuff, with liberty, will make them grow wonderfully.

H. P.

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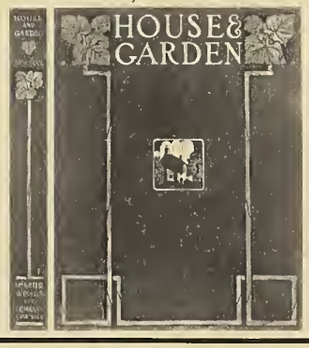
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FROM RANGOON TO MANDALAY. By S. R. VINTON

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HELIGOLAND. By DR. PERRY WORDEN.

Tells some intimate details regarding this island in the Baltic Sea, which belongs to Great Britain and of which possession was obtained by the Germans. The recent edict to the effect that in the future tourists would not be allowed further inland than the seashore, has turned the eyes of the world toward this place and makes this article of timely note.

OVER THE ANDES IN A HANDCAR

Here is a story teeming with active interest, as well as bringing before the reader the wonders of some of the greatest mountains of the world and their conquest by man. The novelty of this article, aside from its adventurous and descriptive features, will make it a very striking part of the magazine, especially on account of its unusual photographs.

THE LATTER DAYS OF POMPEII

A subject of this sort naturally depends on the insight of the author into the intimate side of the places, which is another way of saying that it depends on his knowledge of the people and the history. Mr. Henry James Forman is the author of a number of books on travel and he shows in this article the same keen sympathy with the subject as in his larger books. He makes Pompeii live again in this stirring narrative.

CHEESE DAY AT ALKMAAR. By BLAIR JAEKEL

Tells of the humorous possibilities in the quaint little Dutch town of Alkmaar and its cheese industry. Like all the rest of the articles in the February number of TRAVEL, this is very adequately illustrated with photographs made by the author.

BUDAPEST ON THE "BLUE DANUBE." By SCHUYLER M. MEYER

Here is a splendid article on a beautiful city—Budapest. Comparatively few people have such an idea as to the beauty of this city of Austria-Hungary or of its interesting people. Its picturesque position on the Danube and its more scenic and architectural beauties, as well as its population, are shown in an entirely satisfying and entertaining manner.

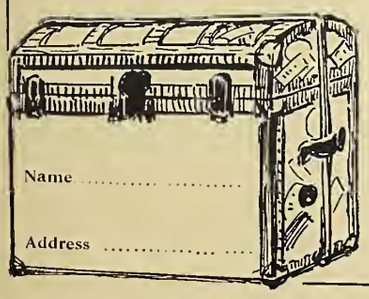
TIPPING AS A FINE ART

Everybody, whether he travels or not, who has been a victim of the tipping system, will find this humorous, yet informative, story of the "Open Hand Society" to his liking. The author, Frank X. Finnegan, writes from a full heart—he has had to distribute largesse to waiters and other servants all over Europe, and what he has to say on the subject will sound a chord of sympathy in every reader. And, incidentally, it will get a laugh.

ARIZONA AND NEW MEXICO

The communities of the Pueblo Indians, those compact little towns of stone and adobe. Oriental in aspect and each with a local government of its own, are not only graphically described by Charles Francis Saunders, but the life and manners of these interesting people are depicted with incisive detail and interest. TRAVEL has never had a more interesting American article than this, and the fourteen photographic illustrations which accompany it leave nothing to be desired by the reader except the actual journey there.

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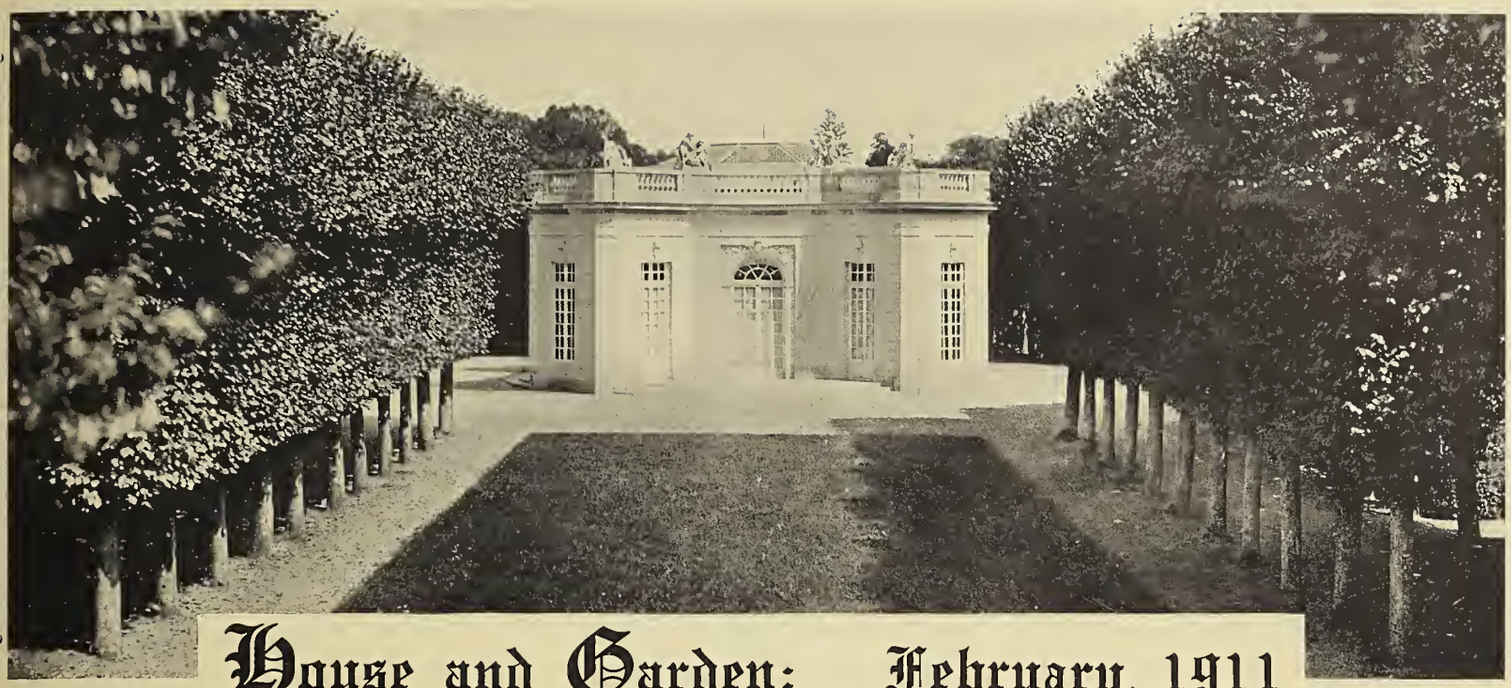
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Care of the Cocker Spaniel

HENRY H. SAYLOR,
EDITOR

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THE SOLARIUM IN THE RESIDENCE OF MR. HENRY P. DAVISON. WALKER & GILLETTE, ARCHITECTS

Tiles in subdued colorings are used in the fireplace facing, flower-boxes, well-head, wainscoting, and for the floor. The adjustable screens over the glass roof and side walls make possible a pleasantly diffused light at all times

House & Garden

VOLUME XIX February, 1911 NUMBER 2



A bank of mesembryanthemum in bloom under an orange tree, and dropping down over a retaining wall. The plants in the front row are Japanese poppies

The Small California Garden

WITH ALL THEIR WONDERFUL CLIMATIC ADVANTAGES CALIFORNIA GARDENS DO NOT "JUST GROW"—THE EXPERIENCES OF AN EASTERNER WHO WENT WEST

BY CHARLES FRANCIS SAUNDERS

Photographs by C. F. and E. H. Saunders, and Alice Hare

OUR first acquaintance with the flowers of California was during a winter's sojourn in Pasadena. We left the East ice-bound and snow-clad in December; and when, four days later, we awakened among the orange groves and palms and roses of the Land of Sunshine, we were enraptured—the advertisements were really true.

That winter proved to be unusual in its mildness—you will find, if you ever live in California, that every season is "unusual" in some particular—and there had been very early rains, so that by the first of the year the wild poppies were making a blaze of color along country roadsides, and the gardens in Pasadena were a revelation of cultivated bloom. There were geraniums of every hue, banked in some cases house-high; callas grew literally in hedges serving as party-fences between city lots; fuchsias and heliotrope hid beneath their masses of exquisite bloom the cottage walls against which they grew and looked in at second story windows; clambering roses smothered some houses completely, or climbed trees and hung festoons of rare color from the crowns twenty or thirty feet up in the air. So, naturally, we carried home with us the idea that everything grew in California without trouble; in fact, more than one native had epitomized the art of gardening there as simply sticking in a cutting anywhere and keeping it wet a few days. The climate would do the rest.

Since that year, we have taken up permanent residence in Southern California, and having wintered and summered for some years a small cottage garden planted by ourselves, we have acquired some views of our own. One of them is that the native notion aforesaid, has led to a certain unnecessary monotony in small California gardens—and it is the small gardens after all,

rather than the show places of the millionaires, that make the character of a place. Following out the plan of growing what is most easily grown, the average Californian has not made the best of the wonderful opportunity which the unique climate of the state sets before him. One garden is too much like another and there is room for better taste in the selection of the plants themselves.

The artist of the family struck the weak spot in California gardening the other day, when she remarked:

"Oh, I think the flowers here are perfectly beautiful, marvelous in growth and variety; but do you think the people always understand the harmony of arrangement to bring out the beauty as it deserves? The purple bougainvillea is simply a regal bloomer, but you find it everywhere—flowering furiously on house-roofs and pergolas and chicken corrals, while cheek by jowl with it, likely as not, are orange-yellow bignonias and scarlet tecomas. And then because red geraniums and yellow California poppies can't help growing in this glorious sunshine, why let them kill each other by setting them side by side? Then again, why always make of a garden a dead level? If a man has a lumpy bit of back lot, he must needs hire a man with a plow and a scoop-shovel and grade and grade and grade, till you could play tennis on it. That is all well enough for a vegetable patch, but there is a charm in irregularity of surface which there is no need whatever to sacrifice in a flower garden."



Foxgloves grow wild in the California woods to a size and stateliness that make Easterners envious

In an individual case, we have found the plan itself of our garden spot the source of quite as much pleasure to our guests as the plants which beautify it. The lot devoted to it (90 x 60 ft.), was the side of an irregular slope, which dipped at the farthest corner some six or eight feet below the highest part, which was near the house. Instead of filling in or leveling to one common-place grade, we made the ground into a series of wide terraces, each dropping a foot or two lower than the one preceding it, and held in place by low retaining walls of gray granite boulders and cobbles hauled from the dry bed of a mountain wash. These are known in Southern California as arroyo stones. There were a few orange trees on the lot, and where these were above the level of the cut-down, we left ample space about them for flower beds, holding them in place with the same sort of retaining wall.

These low walls made many nooks and corners which serve to domicile special plants that have for us some personal association. In one, for instance, grows a clump of a native peutstemon, raised from seed gathered at the Grand Cañon; in another, a patch of mint from the old home "back East," makes perennial fragrance. Along the bases of the walls flower beds extend, and here and there our best rock-climber—*ficus repens*—is planted, relieving the otherwise monotonous line of gray stone with a covering of green leafage.



A Reve d'Or rose in the second year after planting for a porch screen

If the plot, however, is naturally level, variety in surface may be inexpensively created by hauling in enough soil to make a low hillock or two. I have in mind such a garden in the flattest part of Pasadena, which is like a miniature bit of hill country, with a few boulders, large and small, set tastefully on and about two irregular mounds of soil where low growing shrubs and herbaceous perennials sink their roots beneath the moisture-conserving stones, and require a minimum of care.

Still another plan to break up a dead level, a plan especially desirable in a land of outdoor living, is the arbor or small pergola. Ten dollars will amply cover the cost of putting in a structure of this sort made of rough timber. The floor space should be laid with common brick or flat stones, and perennial vines planted for covering. Climb-

ing roses, one of the many tecomas, honeysuckle, wisteria and grape are the most desirable covers. Part evergreen and part deciduous vines insure a good screen in summer, when it is most needed, and a partial one in winter, when the sunshine filtering through will be appreciated. Such an arbor will add beyond words to your garden, not merely in beauty, but in practical value as a place for outdoor meals and relaxation. Simple benches and a table may be made of redwood obtained from the nearest lumber yard and stained. Redwood is a good weather-resister.

As to the plants themselves, our experience is that practically everything that grows in the Eastern garden may be grown here, besides much else, though the radically different climatic conditions on the Pacific Coast—especially the long rainless season from early spring till late autumn—necessitate, in many cases, different treatment. This means the devotion of nearly the whole of one's time to the garden, or the maintenance of a gardener. For those whose circumstances do not permit either of these alternatives, the problem is the practical one of finding out what plants will produce the best continuity of effect the year 'round, with the least outlay of time and money. For ourselves, we have accordingly simplified our floral scheme little by little, until it is represented by the following list. These are flowers that enjoy this climate as much as we do, and behave accordingly; are practically free from disease and insect pests; and, excepting the first three, are by no means conventionally commonplace in California. Of course the list might be extended, but I am writing of personal experience:

1. A few roses, planted in a sunny bed by themselves. To have fall bloom, water must be withheld during July and August, and this is not practicable if they share the bed with other plants.

2. Geraniums. They are constant bloomers at all seasons and in our garden the pink ivy geraniums have a special old stump to clamber over. For winter effects it is safest to group them where the shade of a non-deciduous tree or of the house, keeps them in shadow in the early morning, but permits sun upon them later in the day. This prevents frost damage in cold spells of weather, which are by no means infrequent here.

Nasturtiums—also year-'round bloomers. Our winter beds of them are at the west side of the house, protected by generous eaves, and on the north side of an orange tree. This protection is needed to keep the plants from being nipped on frosty nights. With us, though the tenderest plants on this list, they weathered the exceptionally cold winter of 1909-10, when the mercury several times was as low as 28° at night.



The square of turf before the porch-steps, is *Lippia repens*, a Sicilian plant that will live for months without water



April in a Southern California garden, with stock, foxgloves and sweet alyssum in bloom



In gardens where space permits, there is usually a corner given up to cacti, these curious children of the desert

4. Gaillardias. We give them a bed to themselves, in full sunlight, and they bloom perennially.

5. Sweet alyssum. We use this for bordering some of the beds, for which purpose the Little Gem is best. Seedlings come up in odd corners all over the garden and, summer or winter, this charming little flower is never out of bloom or its perfume absent from the garden.

6. Verbenas. They grow like weeds, are always more or less in bloom, and are good drought-resisters.

7. Mignonette. We keep a bed of this going in the shadow of a tree, which affords it partial shade in summer and frost-protection in winter.

8. Foxgloves. We have a few of these plants growing in odd corners and beneath trees, for the sake of their stately effect when blooming. They appear to be perennial with us; at any rate, the plants live until so overgrown as to make it desirable to replace them with seedlings.

9. Salpiglossis, or Painted Tongue. Blooms from spring till Christmas and re-sows itself; but for best results it is advisable to sow freshly each year. The plants grow from five to seven feet tall and the bloom is a great show all summer and fall.

10. Violets. The staple bloom of winter. To do well they must be kept out of direct sunshine, Our best results are from a bed on the north side of the house and from one under the shade of an orange tree. The latter situation is most to their liking as they get morning sunshine and are shaded entirely from the hot rays of midday. The "Princess" variety is deliciously fragrant, and when the beds are well fertilized and the plants thinned out each summer, the flowers will be long-stemmed and as large as small pansies, the blossoms appearing from December until April.

(*Continued on page* 120)



Why is it that, almost without exception, the rooms that are carried out consistently in a distinct style are in large houses? It is just as easy to furnish a room in the home of moderate size with the same consistency

What the Period Styles Really Are

SUGGESTIONS FOR THE USE OF THE PERIOD STYLES IN MODERN HOMES SO THAT THE RESULT WILL BE CONSISTENT AND HARMONIOUS RATHER THAN MERE AFFECTATION

BY LUCY ABBOT THROOP

[*Modern usage of furniture and fittings for the interiors of American homes would seem to indicate that we have but two available and distinct styles—"Colonial" and Craftsman or so-called "Mission." For a long time the historic period styles were so ignominiously and tastelessly employed as to bring about a revulsion of feeling and their almost complete abandonment. There are signs that the pendulum is swinging back again now, and that a really sincere appreciation of the best that has been done in the past will reveal new possibilities for beauty in the homes of to-day. This is the final article of Miss Throop's series, the preceding subjects being as follows: October,* 1910*—France, Through the Time of Louis XIV; November.—France, From the Regency Through the Empire; December—England, Through the Reign of Queen Anne; January,* 1911*—England, the Georgian Period.*—EDITOR.]

"THIS is my Louis XVI drawing-room," said a lady in proudly displaying her house.

"What makes you think so?" asked her well informed friend.

To guard against the possibility of such biting humor one must be ever on the alert in furnishing a period room. It is not a bow-knot and a rococo curve or two that will turn a modern room, fresh from the builder's hands, into a Louis XV drawing-room.

To make the decoration of a room truly successful one must begin with the architect, for he knows the correct proportions of the different styles and appreciates their importance. He will plan the rooms so that they may complete his work when decorated and form a beautiful and convincing whole. This will give the restfulness and beauty that absolute appropriateness always lends. Someone has aptly said that "Proportion is the good-breeding of architecture," and it is a duty that one owes to one's self and one's architect, not to ruin his good work by unsuitable decoration. It is also a duty one owes to the decorator to have the background correct for what you wish him to do. If one has to take a house that others have planned, one may have to give up some cherished ideas and choose a style more suitable under the circumstances. For instance, the rooms

of the great French periods were high, and often the modern house has very low ceilings, that would not allow space for the cornice, over-doors and correctly proportioned paneling, that are marked features of those times. The delicate beauty of Adam furniture would be lost in the greatness of a Renaissance salon. One must feel strongly this sense of the fitness of things to escape the pitfalls of period furnishing. Most amazing things are done with perfect complacency, but, although the French and English kings who gave their names to the various periods were far from models of virtue, they certainly deserved no such cruel punishment as to have some of the modern rooms, such as we have all seen, called after them.

The best decorators refuse to mix styles in one room and they thus save people from many mistakes, but a decorator without a thorough understanding of the subject, often leads one to disaster. A case in point is an apartment where a small Louis XV room opens on a narrow hall of nondescript modern style, with a wide archway opening into a Mission dining-room. As one sits in the midst of pink brocade and gilding and looks across to the dining-room, fitted out in all the heavy paraphernalia of Mission furniture, one's head fairly reels. No contrast could be more marked or more unsuitable, and yet this is by no means an uncommon case.



A modern reception-room with Louis XVI furniture. The walls are light gray, the woodwork white, in the Adam style, showing the possibility of reconciling these periods

If one intends to adopt a style in decorating one's house, there should be a uniformity of treatment in all connecting rooms, and there must be harmony in the furniture and architecture and ornament, as well as harmony in the color scheme. The foundation must be right before the decoration is added. The proportion of doors and windows, for instance, is very important, with the decorated over-door reaching to the ceiling. The over-doors and mantels were architectural features of the rooms, and it was not until wall papers came into common use, in the early part of the 19th century, that these decorative features slowly died out. Paneling is appropriate for nearly all styles, but should be the correct type for the style chosen. The paneling of a Tudor room is quite different from a Louis XVI room. In the course of a long period like that of Louis XV the paneling slowly changed its character and the rococo style was followed by the more dignified one that later became the style of Louis XVI.

Both the architect and decorator must know what the rooms are to contain, as it is not fair to either to suddenly have something bought that is quite regardless of the carefully thought out plan of decoration. It may put the whole scheme out of key and spoil it. A lady whose dining-room was beautifully furnished in Sheraton furniture one day saw two



It is only in the large mansion that the elaborate type of interior decoration bearing the name of Louis XV seems appropriate

Louis XV console tables that she instantly bought to add to it. The shopman luckily had more sense of the fitness of things than a mere desire to sell his wares, and was so appalled when he saw the room that he absolutely refused to have them placed in it. She saw the point, and learned a valuable lesson.

There is no doubt that in many houses are wonderful collections of furniture, tapestries and treasures of many kinds, that are placed without regard to the absolute harmony of period, although the general feeling of French or Italian or English is kept. They are usually great houses where the sense of space keeps one from feeling discrepancies that would be too marked in a smaller one, and the interest and beauty of the rare originals against the old tapestries have an atmosphere all their own that no modern reproduction can have. There are few of us, however, who can live in this semi-museum kind of house, and so one would better stick to the highway of good usage, or there is danger of making the house look like an antique shop.

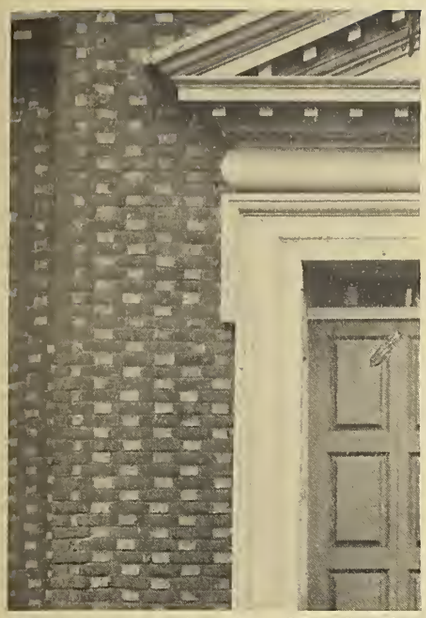
To carry out a style perfectly, all the small details should be attended to—the door-locks, the framework of the doors and windows, the carving. All these must be taken into account if one wishes success. It is better not to attempt a style throughout if it is to be a makeshift affair and show the effects of inadequate knowledge. The elaborate side of any style carrried out to the last detail is really only possible and also only appropriate for those who have houses to correspond, but one can choose the simpler side and have beautiful and charming rooms that are perfectly suited to the average home. For instance, if one does not wish elaborate gilded Louis XVI furniture, upholstered in brocade, one can choose beautiful cane furniture of the time and have it either in the natural French walnut or enameled a soft gray or white to match the woodwork, with cushion of cretonne or silk in an appropriate design. Period furnishing does not necessarily mean a greater outlay than the nondescript and miscellaneous method so often seen.

I am taking it for granted that reproductions are to be chosen, as originals are not only very rare but also almost prohibitive in price. Good reproductions are carefully made and finished to harmonize with the color scheme. The styles most used at present are, Louis XIV, XV, XVI, Jacobean, William and Mary, and Georgian. The Gothic, Italian and French Renaissance, Louis XIII, and Tudor styles are not so commonly used, but of course may be followed if one wishes. We naturally associate dignity and grandeur with the Renaissance and it is rather difficult to make it seem appropriate for the average American house, so it is usually only used for important houses and buildings. Some of the Tudor manor houses can be copied with delightful effect. The styles of Henri II and Louis XIII can both be

(*Continued on page* 119)



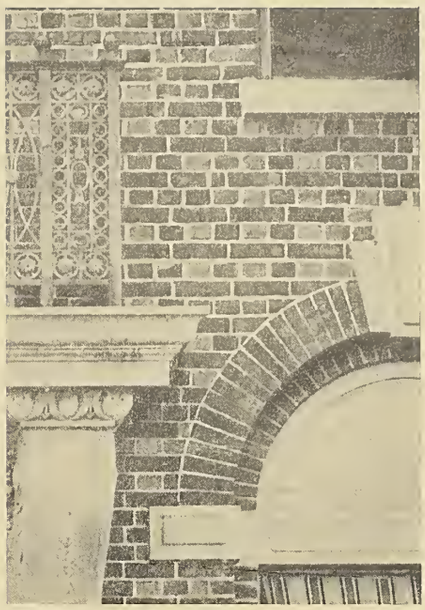
The refinement of proportions and delicacy of detail in this modern Adam room, appeals far more strongly to American taste than does the gilded rococo work that characterizes much of the French period furnishing



Flemish bond in .the Old Swedes Church. The headers are burned to a bluish-black glaze



Common running bond in its best form. Every fourth row is one of alternate headers and stretchers to tie the facing brick to the rest of the wall



English bond—alternate rows of headers and stretchers, with joints of the latter over one another

The Best Use of Brickwork

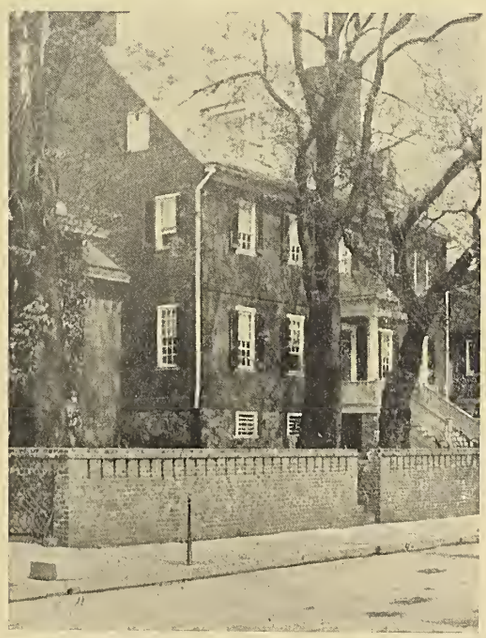
THE COMMONER METHODS OF BONDING BRICK WALLS AND THEIR RESPECTIVE VALUES BOTH IN APPEARANCES AND STABILITY—THE PASSING OF THE "PRESSED BRICK FRONT"

BY HAROLD DONALDSON EBERLEIN

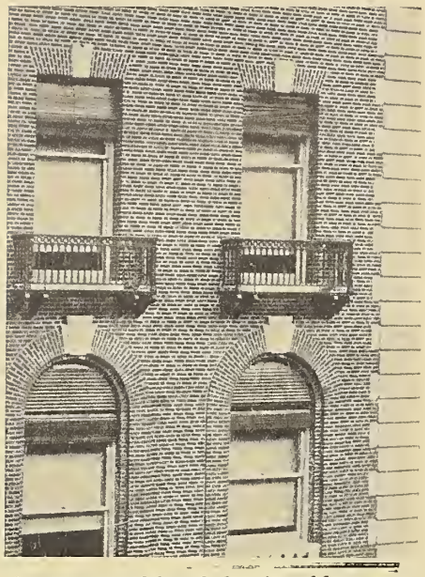
[Two houses that are alike in every respect, but the brick walls, may be almost as dissimilar in appearance as if one were of stone and the other of brick. The best use of wall materials is a subject of as great importance as the architectural style that is to be followed, yet the layman, as a rule, seems not to appreciate this fact; to him a brick house is merely a brick house—until he realizes that his finished home falls far short of his ideal. This article is the second of a short series, in which the aim is to make clear the possibilities in securing distinctive character through an intelligent use of the various building materials. The author wishes to give credit to Mr. H. L. Duhring, architect, for many helpful suggestions.—EDITOR.]

IF "pigs is pigs," doubtless, by the same token, "bricks is bricks" and also "mortar is mortar." Notwithstanding the profundity of this truism, it is just as well to remember that there are bricks and bricks and that there is mortar and mortar too, and that both, when brought together in a wall, mutually interact and are susceptible to large diversity of treatment. This very possibility of different combination affords the architect a field for the exercise of not a little ingenuity. To call the attention of the layman—especially the layman who has a house to build—to the possibilities presented is the purpose of this paper. Most people consider one brick wall much the same as another, and consequently there has been no stimulus to strive for artistic effect in brick texture. One way in which that desired end may be hastened is by becoming fully cognizant of the resources within our grasp. It is high time for us to realize the possibilities of our structural stuffs in this era of extensive building, when on every hand there is the will, backed by abundant means, to secure the best results that can be achieved by the union of the architect's and builder's arts.

Until quite recently in America far too little use has been made of the capabilities of brick as a means of architectural expression, and the thrall of pressed brick and running bond as the dominant type of brick masonry is by no means shaken off yet, though there are unmistakable indications of education in taste. We are too much accustomed to look upon an exterior wall surface as an inevitable necessity, rather than as an opportunity for seemly decoration, or for insuring harmony with the surroundings. Surfaces of brick, stone, plaster and even wood, lend themselves to artistic and varied treatment, though none in that respect are superior to brick in the wide range of variety attainable. Lacking perhaps some of the virile strength and rigidity, perhaps too, some of the stern dignity of stone, it furnishes a medium more readily adaptable to the many-sided expression of creative activity to be found in an advanced stage of culture. In point of color and texture, the brick wall has but few limitations to impose on the architect. The style of architecture for a building once determined, the owner and the architect have a great assortment of possible wall textures and colors to pick from. Although one texture of wall surface may be just as appropriate as another for the particular style of architecture to be employed, still the man who is to live in the house may have his strong pref-



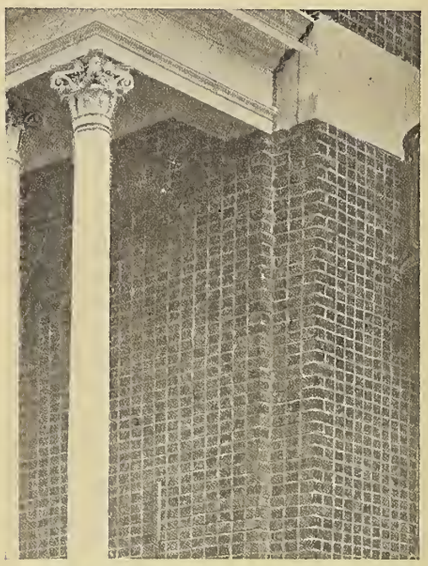
This old Southern mansion and its garden wall are of all-header bond, breaking joints



An un-named bond that is seldom seen, giving a curious diaper pattern. It consists of rows of headers and stretchers alternating with rows of stretchers alone, the latter breaking joints in alternate courses. Sperry, York & Sawyer, architects



An interesting texture is obtained here with second-hand brick, from which the old mortar has not been fully cleaned. Philip B. Howard, architect



The startling bond used in the Colony Club, New York City, McKim, Mead & White, architects. Such a bond would be impossible without the aid of modern cement mortar, as there is no breaking of joints in the courses excepting at the corners

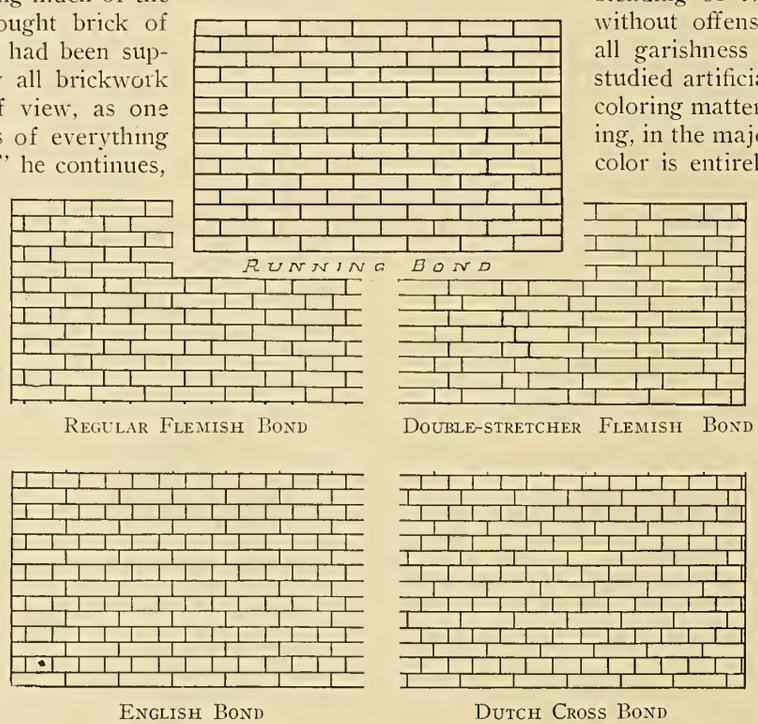
erences to which it were advisable to give particular attention.

In speaking of the texture of a wall we must take into consideration the kind of bricks used, their shape and size, their color, their bond, that is to say, the way in which they are laid to give a distinctive pattern to the wall face, the mortar joints and finally, the kind of mortar used. As to the kind of brick available, it is gratifying to note that we are happily passing from the depressing reign of pressed brick and coming more and more to the use of brick of rough texture and varied color. It need scarcely be said that the results are infinitely more artistic and satisfactory in every way. During much of the nineteenth century, after the rought brick of Colonial and Post-colonial times had been supplanted by pressed brick, nearly all brickwork was from an aesthetic point of view, as one writer has put it, "the antithisis of everything good." "The brickmaker's ideal," he continues, "seems to have been a single shape and size, a surface like cut cheese, and a color like a fire-cracker." With such dull and unpromising material, whose "'faultily faultless' surface finish and absolute uniformity of color" were fatal to inspiration, not much could be expected of the brick architect use of the period. It was not until bricks of different shapes and sizes and varied colors began to reassert their claims that the trammels of deadly monotony were thrown off and it became possible to impart some individuality of expression to a building through its material fabric.

Many of the rough-textured bricks, instead of being pressed out in a mould with unerring mathematical precision and provoking evenness, are vertically cut into shape by wire, so that a roughened and apparently coarsely porous face is given the sides to be exposed in building, and in this condition they are burned intensely hard. This surface, especially when wide, gravelly, mortar joints are used, weathers admirably, and under the influence of atmospheric condition soon puts on a mellowness of tone that could never be hoped for on a smooth brick surface.

In color, the rough bricks range from deep shades of purplish brown, bluish red, copper, green and russet to lighter and more brilliant hues including reds and buffs. The perfectly natural blending of two or more colors in one brick, without offensively glaring contrasts, prevents all garishness of effect or any appearance or studied artificiality. Though in some instances coloring matter is added to the clay before burning, in the majority of rough-textured bricks the color is entirely due to the natural qualities of the clay used and to the firing. The soft and rich appearances of a wall of such material invariably harmonizes with the surroundings and, with its welcome variations in color, produces an impression of fitness to the situation that could never be reached by the unsympathetic surface and rigidity of uniform "fire-cracker" color presented by an expanse of pressed brick.

The way in which bricks are laid or the bond, is an important consideration. The most common bond, in fact almost the only one employed during a great part of the ninteeenth century, is the running bond, in which all the courses are composed of "stretchers," that is to say, bricks laid lengthwise,



The common named bonds—though the lower two are not often seen. The difference between these two is that in the English bond the alternate rows of stretchers do not break joints; in the Dutch cross bond they do

the only "headers" or endwise bricks visible being at frequent intervals where their use is made obligatory by the local building laws to tie the face-wall to the backing. Each course breaks joints vertically with the courses immediately above and below. Running bond is perhaps the simplest and certainly the least interesting and artistic way of laying brick and has little to commend it except considerations of economy when a misguided desire for smug precision outwardly prompts the use of a pressed brick facing. Of course running bond gets the greatest superficial display out of a given number of expensive facing bricks. One of the illustrations that give an example of this method is interesting, apart from the attractive simplicity of the house, as showing a rational and tasteful use of second-hand brick. It is interesting also to note the simple and effective method of ornamentation adopted in countersinking a course above the windows of the first floor. The slightly projecting foundation capped by a drip course is worth attention too.



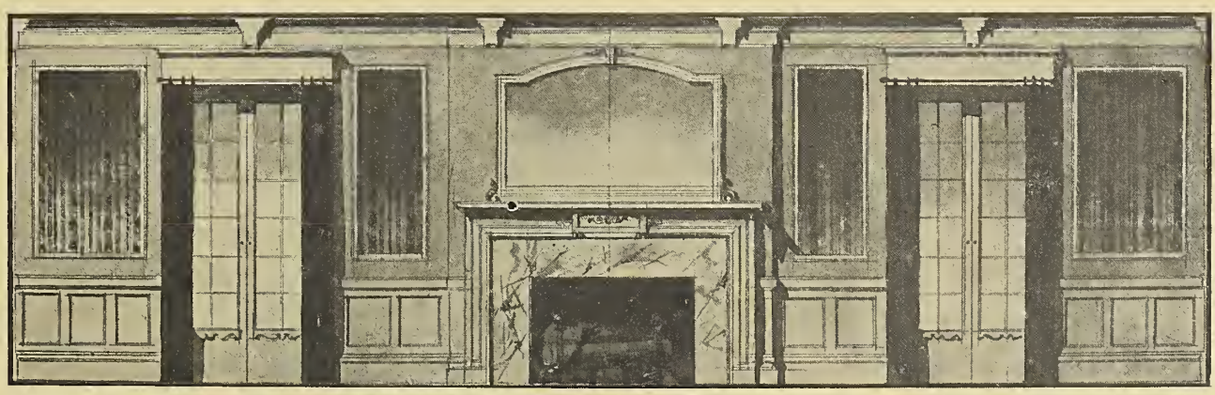
Double-stretcher Flemish bond as used in an interesting example of good brickwork—the University of Pennsylvania Museum

The method of laying four other bonds is shown in an accompanying illustration. The Flemish bond, in which every course consists of alternate headers and stretchers is, after the running bond, the one we most commonly meet with, having been generally used in our brick building of Colonial date, in which the black header and red stretcher effect is so often noticeable. Flemish bond is constructionally honest, artistic and satisfying, and its almost universal employment in modern building of Colonial style, cannot be too strongly commended. The accompanying picture of a portion of the wall of the "Gloria Dei" or Old Swedes Church, Philadelphia, shows an excellent example of Flemish bond where the headers are brought into rather unusual prominence by the bluish-black glaze with which most of them are encrusted. This vitreous glaze, it has been suggested by some ex-

(*Continued on page* 118)

Designing the Living-room by Itself

SUGGESTIONS FOR THE ARCHITECTURAL TREATMENT, THE CONSISTENT FURNISHING AND THE BEST WORKING ARRANGEMENT OF THE USUAL SIZE ROOM



A side elevation of the room, showing the fireplace and the French doors to the piazza. Above the white wainscoting, the background paper is a putty color, the panels being filled with a striped and foliated fabric, held in place by a flat molding strip

BY A. RAYMOND ELLIS

Illustrations by the Author

AFTER the method of modern planning, the living-room is treated as the principal room in the house. I do not mean to say that this room should be overdone, or given undue prominence to the exclusion of the other rooms, but it is essential that this room be treated differently from the old-fashioned way we formerly treated our living-rooms, then generally a front and back parlor. These two rooms have now been superseded by one large room, as our mode of living and entertaining makes it more desirable than the two small, stuffy rooms, then used only occasionally. Today we plan to give pleasure and comfort to the family, rather than the occasional guest.

There are probably two or three dozen ways that the living-room can be planned and decorated and at the same time be comfortable and attractive. I have chosen to illustrate this with a type of living-room that adapts itself to almost any house and offers the greatest amount of free space when the room is properly furnished. The room is 15 ft. x 29 ft. 6 in., with a ceiling height of 9 ft., these dimensions giving a well-proportioned room. The fireplace is in the center of the west wall, flanked on each side by two French doors which open out on a piazza. At each end of the room are two windows, balancing one another. On the east wall a wide opening with French doors permits access to the main hall. The most prominent feature of the room is the fireplace, which is accentuated and made a natural center. This is an important con-



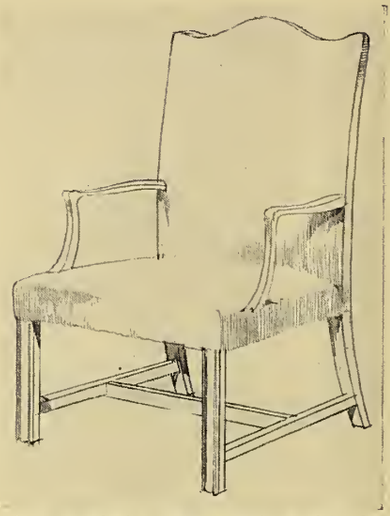
A Martha Washington wing-chair was designed and built for the room at a cost of $54 uncovered

sideration when planning a natural grouping of the family or its guests.

The treatment of the room is Colonial. A low wainscot, 2 ft. 6 in. high, comprising a base, panel and cap, is carried around the room. The ceiling is beamed with four substantial beams and a half beam to form a cornice around the room at the junction of the wall and ceiling. Over the heads of the doors and windows there is a wide wooden frieze with a cap which ties them, one might say, to the bottom of the cornice, and makes them more completely an integral part of the woodwork. The window stools form a part of the wainscot's cap.

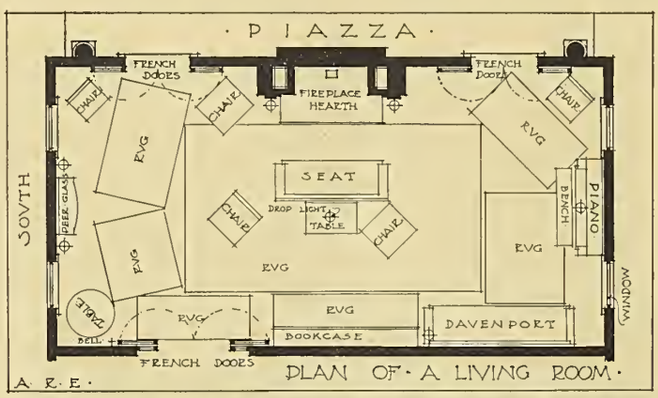
The finish of the room is white wood, given four coats of lead and oil paint, with a fifth coat of white enamel, rubbed down, and a sixth and final finishing coat of enamel of an ivory shade that dries out with a very dull satin-like lustre that is very durable and not easily marred. Above the wainscot the walls are covered with a heavy background paper having a body color almost of a putty shade, enlivened in certain lights with a pinkish caste. This is accented by the panels, between the windows and doors, of a delicately hued fabric with a foliated striped design. A flat molding covers the edge of the fabric and forms the panel. In order to balance these and add character to the room, the draperies at the windows and doors are of soft blue velour, without which the scheme would be lifeless and flat. The facing of the fireplace is of Sienna marble surmounted with a simple mantel, consisting merely of a heavy classical architrave, with a shelf above and a large plate glass mirror over it. One must not lose sight of the fact that the colors of this room, while light and delicate, are all very rich and warm, due to the predominating ivory color of the woodwork, enlivened and strengthened by the richer and heavier color used in the panels and curtains.

The ceiling is sand-finished and tinted to match the walls. The floor is of quartered oak, filled and given two coats of a finish which produces a durable even surface with a dull lustre that is not so slippery as a waxed floor. The disposition of the rugs over this floor is a matter of personal taste and the amount one can afford for rugs. The rugs should be Oriental and of light uniform coloring. The plans show probably the most economical way of covering the floor—using one large rug as a center and filling with smaller rugs. One large rug might be obtained that would extend from the piano to the pier glass, but it would have to be an odd shape or specially made. Two large rugs might be used, one in each end of the room, with a small rug to fill in before the fireplace. The approximate positions and proper design for the various pieces of furniture used in the room are indicated.



An armchair to harmonize with the wing-chair cost $40 to make

In order to realy obtain the benefit of the fireplace, it is necessary to have a broad comfortable sofa or an upholstered mahogany seat in front of it. In back of this should be a small mahogany table on which an ornamental lamp may stand. On each side of the table can be drawn up large comfortable chairs. This arrangement permits the light of the lamp to fall in the correct position for anyone wishing to read in the chairs or on the seat in front of the fireplace. At one side of the fireplace a large wing chair would be well placed. The bookcases would, of course, be unnecessary if there were a library in the house, but where the living-room is to answer the general purposes of the family, the book-shelves would be found very useful, and could be movable or built in as part of the finish. Between the northern windows a fine position is obtained for the piano, on the right of which is a good place for a davenport.

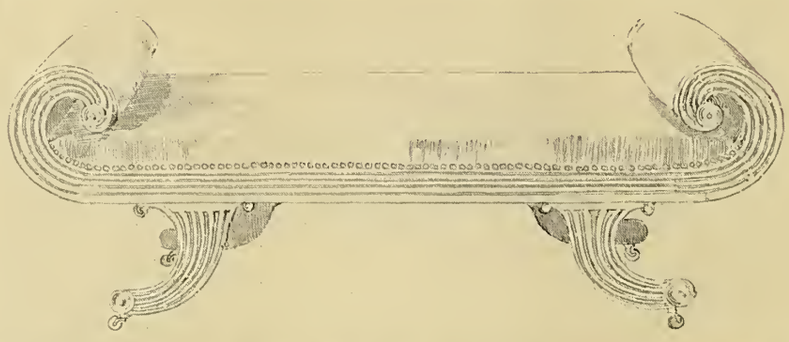


The plan shows a good working arrangement of rugs and furniture for the typical modern living-room measuring 15 x 30 ft.

The disposition of the minor pieces of furniture need not be mentioned, except the fact that a pier glass at the opposite end of the room, between the two southern windows is a very decorative treatment, and that the corner at the left affords a place for a tea table or a Colonial pie-crust table.

In addition the electric lights are provided with switches, and in the baseboard around the room are two plugs for attaching portable table lamps. There must also be a bell registering its signal on an annunciator in the

(*Continued on page* 116)



An 18th century type of sofa was made from the architect's drawings at a cost of $90, in the cotton covering

Grow Your Own Fruit

WHY AND HOW YOU SHOULD PICK APPLES, PLUMS, PEACHES, PEARS AND CHERRIES FROM YOUR OWN TREES---THE BEST VARIETIES AND TYPES OF EACH TO SELECT

BY F. F. ROCKWELL

Photographs by E. F. Hall and others

[Mr. Rockwell's series of articles that appeared last year in these pages, under the title "Grow Your Own Vegetables," met with so many expressions of appreciation that we are doubly glad to follow it with three articles on an equally important phase of the home garden. The second article, to appear next month, will tell of planting young stock, cultivation methods, the use of green and other fertilizers, etc.—EDITOR.]

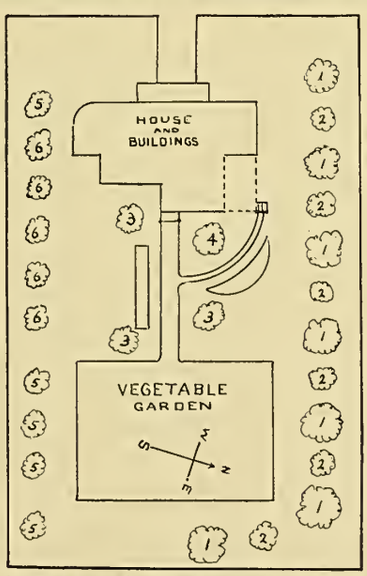
I KNOW a doctor in New York, a specialist, who has attained prominence in his profession, and who makes a large income; he tells me that there is nothing in the city that hurts him so much as to have to pay out a nickel whenever he wants an apple. His boyhood home was on a Pennsylvania farm, where apples were as free as water, and he cannot get over the idea of their being one of Nature's gracious gifts, any more than he can overcome his hankering for that crisp, juicy, uncloying flavor of a good apple, which is not quite equaled by the taste of any other fruit.



You can grow better fruit in your own garden than you can buy

And yet it is not the saving in expense, although that is considerable, that makes the strongest argument for growing one's own fruit. There are three other reasons, each of more importance. First is quality. The commercial grower cannot offord to grow the very finest fruit. Many of the best varieties are not large enough yielders to be available for his use, and he cannot, on a large scale, so prune and care for his trees that the individual fruits receive the greatest possible amount of sunshine and thinning out—the personal care that is required for the very best quality. Second, there is the beauty and the value that well kept fruit trees add to a place, no matter how small it is. An apple tree in full bloom is one of the most beautiful pictures that Nature ever paints; and if, through any train of circumstances, it ever becomes advisable to sell or rent the home, its desirability is greatly enhanced by the few trees necessary to furnish the loveliness of showering blossoms in spring, welcome shade in summer and an abundance of delicious fruits through autumn and winter. Then there is the fun of doing it—of planting and caring for a few young trees, which will reward your labors, in a cumulative way, for many years to come.

But enough of reasons. If the "call of the soil" is in your veins, if your fingers (and your brain) in the springtime itch to have a part in earth's ever-wonderful renascence, if your lips part at the thought of the white, firm, toothsome flesh of a ripened-on-the-tree red apple—then you must have a home orchard without a month's delay.



A suggested arrangement of fruit trees on the small place: 1—Apples, 2—Peaches, 3—Cherries, 4—Quinces, 5—Plums, 6—Pears

And it's not a difficult task. The stone fruits, fortunately, are not very particular about their soils. They take kindly to anything between a sandy soil so loose as to be almost "shifting," and heavy clay. Even these soils can be made available, but of course, not without more work. And you don't need a whole farm to have room enough for all the fruit your family can possibly eat.

Time was, when to speak of an apple tree brought to mind one of those old, moss-barked giants that served as a carriage shed and a summer dining-room, decorated with scythes and rope swings, requiring the services of a forty-foot ladder and a long handled "picker" to gather the fruit. That day is gone. In its stead have come the low-headed standard and the dwarf forms. The new types came as new institutions usually do, under protest. The wise said they would never be practical—the trees would not get large enough and teams couldn't be driven under them. But the facts remained that the low trees are more easily and thoroughly cared for; that they do not take up so much room; that they are less exposed to high winds, and such fruit as does fall is not injured; that the low limbs shelter the roots and conserve moisture; and, above all, that picking can be accomplished much more easily and with less injury to fine, well-ripened fruit. The low-headed tree has come to stay.

If your space will allow, the low-headed standards will give you better satisfaction than the dwarfs. They are longer lived, they are healthier, and they do not require nearly so



Fruit trees are not very particular about their soil. Anything between a loose sandy soil and heavy clay serves, if well drained

much intensive culture. On the other hand, the dwarfs may be used where there is little or no room for the standards. If there is no other space available, they may be put in the vegetable or flower garden and incidentally they are then sure of receiving some of that special care which they need in the way of fertilization and cultivation.

As I have said, any average soil will grow good fruit. A gravely loam, with a gravel soil, is the ideal. Do not think from this, however, that all you have to do is buy a few trees from a nursery agent, stick them in the ground and from your negligence reap the rewards that follow only intelligent industry. The soil is but the raw material which work and care alone can transform, through the medium of the growing tree, into the desired result of a cellar well stored each autumn with delicious fruit.

Fruit trees have one big advantage over vegetables—the ground can be prepared for them while they are growing. If the soil will grow a crop of clover, it is already in good shape to furnish the trees with food at once. If not, manure or fertilizers may be applied, and clover or other green crops turned under during the first two or three years of the trees' growth, as will be described later.

The first thing to consider, when you have decided to plant, is the location you will give your trees. Plan to have pears, plums, cherries and peaches, as well as apples. For any of these the soil, of whatever nature, must be well drained. If not naturally, then tile or other artificial drainage must be provided. For only a few trees it would probably answer the purpose to dig out large holes and fill in a foot or eighteen inches at the bottom with small stone, covered with gravel or screened coal cinders. My own land has a gravely subsoil and I have not had to drain. Then with the apples, and especially with the peaches, a too-sheltered slope to the south is likely to start the flower buds prematurely in spring, only to result in total crop loss from late frosts. The diagram on page 89, suggests an arrangement which may be adapted to individual needs. One may see from it that the apples are placed to the north, where they will to some extent shelter the rest of the grounds; the peaches where they will not be coddled; the pears, which may be had upon quince stock, where they will not shade the vegetable garden; the cherries, which are the most ornamental, where they may lend a decorative effect.

And now, having decided that we can—and will—grow good fruit, and having in mind suggestions that will enable us to go out tomorrow morning and, with an armful of stakes, mark out the locations, the next consideration should be the all-important question of what varieties are most successfully grown on the small place.

The following selections are made with the home fruit garden, not the commercial orchard, in mind. While they are all "tried and true" sorts, succeeding generally in the northeast, New England and western fruit sections, remember that fruits, as a rule, though not so particular about soil as vegetables, seem much more so about locality. I would suggest, therefore, submitting your list, before buying, to your State Experiment Station. You are taxed for its support; get some direct result from it. There they will be glad to advise you, and are in the best position to help you get started right. Above all, don't buy from the traveling nursery agent, with his grip full of wonderful lithographs of new and unheard-of "novelties." Get the catalogue of several reliable nurseries, take standard varieties about which you know, and buy direct. Several years ago I had the chance to go carefully over one of the largest fruit nurseries in the country. Every care and precaution was taken to grow fine, healthy, young trees. The president told me that they sold thousands every year to smaller concerns, to be resold again through field and local agents. Yet they do an enormous retail business themselves, and of course their own customers get the best trees.

The following are listed, as nearly as I can judge, in the order of their popularity, but as many of the best are not valuable commercially, they are little known. Whenever you find a particularly good apple or pear, try to trace it, and add it to your list.

APPLES

Without any question, the apple is far and away the most valuable fruit, both because of its greater scope of usefulness and its longer season—the last of the winter's Russets are still juicy and firm when the first early harvests and Red Astrachans are tempting the "young idea" to experiment with colic. Plant but a small proportion of early varieties, for the late ones are better. Out of a dozen trees, I would put in one early, three fall, and the rest winter sorts.

Among the summer apples are several deserving special mention: Yellow Transparent is the earliest. It is an old favorite and one of the most easily grown of all apples. Its color is indicated by the name, and it is a fair eating apple and a very good cooker. Red Astrachan, another first early, is not quite so good for cooking, but is a delicious eating apple of good size. An apple of more recent introduction and extremely hardy (hailing first from Russia), and already replacing the above sorts, is Livland (Livland Raspberry). The tree is of good form, very vigorous and



A plum tree in full bearing. Low-headed trees have come to stay

healthy. The fruit is ready almost as soon as Yellow Transparent, and is of much better quality for eating. In appearance it is exceptionally handsome, being of good size, regular form and having those beautiful red shades found almost exclusively in the later apples. The flesh is bright white, reddish sub-skin, tender and of an agreeable sourish flavor. Another good early is Chenango (Chenango Strawberry). It is not so well known, nor so much appreciated as it should be, for two of its characteristics have mitigated against its commercial use, and these same characteristics add to its value in a home orchard. First, it does not attain a very large size; and second, it is a "successive" ripener, the maturing of its fruits being stretched throughout September. In shape it is oblong, not very regular; in color, yellow underground, with attractive red, irregular stripes overlaid. It is essentially an eating apple, being too mild for cooking purposes.

Among the autumn group my preference is Porter, for an early sort, handsome and regular in shape, and of an attractive ripe yellow color. I remember how the first "windfalls" from the two trees in our orchard used to be prized in the daily hunts after school, and very often, when no one was looking from the house, the force of gravity seemed to have a strangely selective action in the case of the biggest fruits. Gravenstein is another early, well and favorably known. For late autumn sorts, McIntosh Red is without an equal. The color is one of the most tempting reds of any apple grown, shading to dark velvet, overspread with a delicate "bloom," in form, remarkably even and round. Its quality is fully up to its appearance. The white, crisp, breaking flesh, most aromatic, deliciously sub-acid, makes it ideal for eating. A neighbor of mine sold four hundred and six dollars' worth of fruit from twenty trees to one dealer. For such a splendid apple McIntosh is remarkably hardy and vigorous, succeeding over a very wide territory, and climates severe enough to kill many of the other newer varieties. The Fameuse (widely known as the Snow), is an excellent variety for northern sections. It resembles the McIntosh, which some claim to be derived from it. Fall Pippin, Pound Sweet and Twenty Ounce, are other popular late autumns.

In the winter section, Baldwin, which is too well known to need describing, is the leading commercial variety in many apple districts, and it is a good variety for home-growing on account of its hardiness and good cooking and keeping qualities; but for the home orchard, it is far surpassed in quality by several others. In northern sections, down to the corn line, Northern Spy is a great favorite. It is a large, roundish apple, with thin, tender, glossy skin, light to deep carmine over light yellow, and an excellent keeper. In sections to which it is adapted it is a particularly vigorous, compact, upright grower. Jonathan is another splendid sort, with a wider range of conditions favorable for growth. It is, however, not a strong growing tree and is somewhat uncertain in maturing its fruit, which is a bright, clear red of distinctive flavor. It likes a soil with more clay than do most apples. In the Middle West and Middle South, Grimes (Golden) has made a great local reputation in many sections, although in others it has not done well at all.



The extent to which the French gardeners go in their intensive culture of fruit



Two crops on the same ground at the same time—fruit and poultry. The chickens help to keep in check the devastating hordes of insects

The Spitzenberg (Esopus) is very near the top of the list of all late eating apples, being at its prime about December. It is another handsome yellow-covered red apple, with flesh slightly yellowish, but very good to the taste. The tree, unfortunately, is not a robust grower, being especially weak in its earlier stages, but with good cultivation it will not fail to reward the grower for any extra care it may have required.

These, and the other notable varieties, which there is not room here to describe, make up the following list, from which the planter should select according to locality:

Earliest or Summer.—Early Harvest, Yellow Transparent, Red Astrachan, Benoni (new), Chenango, Sweet Bough, Williams' Favorite, Early Strawberry.

Early Autumn.—Alexander, Duchess, Porter, Gravenstein McIntosh Red.

Late Autumn.—Jefferies, Fameuse (Snow), Maiden's Blush, Wealthy, Fall Pippin, Pound Sweet, Twenty Ounce, Cox Orange, Hubbardston.

Winter.—Baldwin, Rhode Island Greening, Northwestern Greening, Jonathan, Northern Spy, Yellow, Swaar, Delicious, Wagener, King, Esopus, Spitzenberg, Yellow Bellflower, Winter Banana, Seek-no-Further, Talman Sweet, Roxbury Russett, King David, Stayman's Winesap, Wolf River.

PEARS

Pears are more particular than apples in the matter of being adapted to sections and soils. Submit your list to your State Experiment Station before ordering trees. Many of the standard sorts may be had where a low-growing, spreading tree is desired (for instance, quince-stock pears might be used to change places with the plums in the diagram on page 89). Varieties suitable for this method are listed below. They are given approximately in the order of the ripening.

Wilder: early August, medium in size, light yellow, excellent quality. Does not rot at the core, as so many early pears are likely to do.

(*Continued on page* 116)



It is said that a robin will eat several times its own weight of worms each day

How the Birds Benefit Garden and Orchard



The bluejay will welcome a post in your garden, from which to spy out insects

THE SPLENDID ASSISTANCE RENDERED THE GARDENER THROUGH THE DESTRUCTION OF INSECT LIFE IN EVERY STAGE—HOW TO ENLIST THE BIRDS' SERVICES AND HOW TO AID THEM IN THEIR CRUSADE

BY CRAIG S. THOMS

Photographs by the author

OVER ten years ago (1898) the United States Department of Agriculture issued a bulletin of thirty-nine pages, entitled, "Some Common Birds in Their Relation to Agriculture." For horticulturists and gardeners, such subjects as "The Habits of Birds," "The Benefits of Birds," "The Protection of Birds," and "How to Attract Birds," are now matters of serious study, for it is coming to be well understood that birds help us in raising fruit and vegetables in ways that we are least able to help ourselves. Weeds can be fought with hoe and cultivator; but to fight insects that cut the roots of our vegetables just below the ground, feed upon their tender leaves, burrow under the bark of trees, weave their swarming nests in tiptop branches, or lay their eggs in fruit before it is ripe—this fight requires the assistance of birds. And so constant is their help that only if we were without them for a few seasons, could we realize their effectiveness.

It is well known that most insects pass through four stages of existence—the egg stage, the larval stage, the pupa stage, and the imago, or perfect insect stage. In all of these stages insects are food for birds. Warblers and vireos, which flit almost hummingbird-like about leaves and blossoms, destroy countless eggs; practically all birds that frequent orchard and garden, feed upon larvae (worms and caterpillars); chrysalids, pupae and larvae, are eagerly devoured the year round; and one family of birds is named "flycatchers" because they feed almost entirely upon mature insects; and to this family should be added swallows and swifts, which feed in the same way.

The point to which attention is here specifically directed is, that the birds are destroyers of insect enemies, not only during the active larval stage, when these enemies do most harm, but from the time insect eggs are laid, through larval state and pupa state and imago state; in a word, throughout the whole life history of the insect.

Of course, if we were to go into the matter exhaustively, many exceptions would have to be made to this statement, since some insect eggs are laid where birds cannot get at them; some larvae mature where they are perfectly safe, for example, inside of "wormy apples"; while some pupae are buried in the ground. But insects in every stage of development, wherever accessible, are food for birds, and birds are always in search of them.

It is interesting to note that every part of the tree in your orchard has its birds. Orioles and grosbeaks feed in its topmost branches; warblers, vireos and kinglets scan the surface of leaves on middle and lower limbs, and peer into every blossom; cuckoos love the shade, and feed upon the large caterpillars found on inner twigs; chickadees, nuthatches, creepers and woodpeckers examine every bark-crevice on trunk and limb. There is no part of a tree which has not its bird whose life habit it is to find insect food in that particular place.

Robins, thrushes, thrashers, catbirds, bluejays and chewinks, we find feeding for the most part, upon the ground. They hop everywhere, the robins and thrushes preferably upon the open lawn or under trees; the catbirds, thrashers, and chewinks, whose habits are more seclusive, love best to work under bushes or among shrubbery, where the chewink may often be found scratching among the leaves like an old hen.



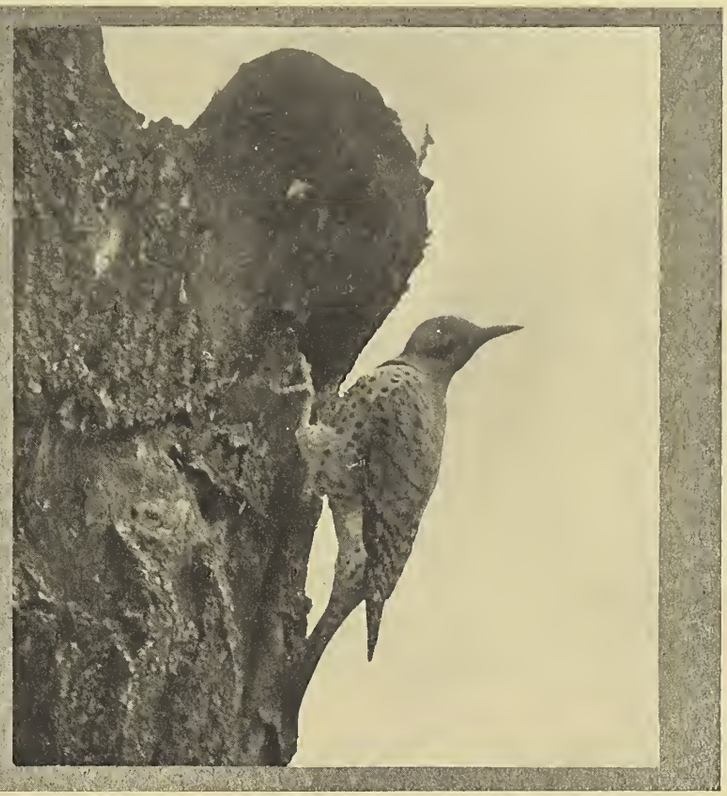
Our good friend, "Downy," at the door of his home, in an old tree trunk set up for the purpose

Nor must we forget the helpfulness of our winter birds in ridding our orchards and gardens of insects. Winter birds are few, compared with the dozens of different kinds that we have in summer. But in the winter the places where insect food may be secured are also few. Larvae and pupae are to be found in bark crevices, under loose bits of bark, in decayed knots or in dead trees. In such places our winter birds keep up an incessant search for them. The chickadees search the smaller branches; creepers run up the trunks and larger branches, searching with their curved bills every crevice that opens upward; while the nuthatches search the same parts of the tree, running always downward and searching every crevice that opens downward. The woodpeckers also search trunk and large branches and have bills fitted for chiseling out borers that lie buried in the wood.

During the cold months of the year



The hairy woodpecker is one of our winter allies, searching dead branches and chiseling out the borers



Set up a large branch or part of the trunk of an old tree in the garden. The flicker will probably accept it as a home

birds require a great deal of food. The tidbits which they secure in larvae and pupae form are not large, and therefore, must be numerous. It is an interesting question whether our winter birds, working under the conditions mentioned during nearly eight months of the year—from September to May, do not destroy almost as many insects as the larger number of birds, working under summer conditions, during the other four months.

During the time that fruit is ripe, certain birds exact a small toll, especially of cherries and raspberries. And yet, from the foregoing facts there would seem to be no question that the work which they do secures for the horticulturist both a larger and a better crop of fruit than would otherwise be possible.

By giving the matter a little attention, many birds may be attracted to garden or orchard which otherwise would seek different retreats. From the horticultural standpoint the best way to attract them is to provide those conditions under which they readily nest. On account of their exceedingly rapid growth, young birds are ravenous creatures and consume an astonishing amount of food. The young of most birds, even seed-eating birds, are fed upon insects; so that a few nests in bushes and trees will mean the destruction of a surprising amount of insect life.

A loose brushpile in the corner of the orchard nearly always means a brown thrasher's nest. A few raspberry bushes growing wild along the fence among high grass, or better, a few wild rose bushes growing under the same conditions, make a favorite place for the black-billed cuckoo to rear her young. A wild goosberry bush in some secluded corner will nearly always contain a catbird's nest. Dead trees can be put to better use than that of fuel. A trunk or limb containing an old woodpecker's nest, if set up as a fence post, will usually attract a pair of bluebirds or wrens. The observing man will erect several of these, for no sooner have these birds brought one brood from the nest than they are thinking of another; and if the place is ready for them their second nest will usually be made in the same orchard as the first, so that the male can care for the first brood while his mate hatches the second clutch of eggs.



A female bluebird bringing home a choice morsel for her young

Every dead trunk or large branch, whether it contains a former nest or not, is valuable if set up so as to appear natural, for flickers, downy and hairy woodpeckers and chickadees always seek dead trees in which to excavate their nests. But it is important to have the dead branch so decayed within as to be of brittle texture, otherwise the birds, with only their bills as instruments, will not be able to chisel out their nests in them; and the bark should be left on.

For wrens and bluebirds, of course, suitable houses may be provided, even in one's dooryard; but I always think the birds are a little better pleased if

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In Ramsbury Manor, Wiltshire. The woodwork is in the style of Sir Christopher Wren, but the mantel and plaster ceiling are typical of the Adam style



A trophy group by Grinling Gibbons, in light wood applied to a dark background

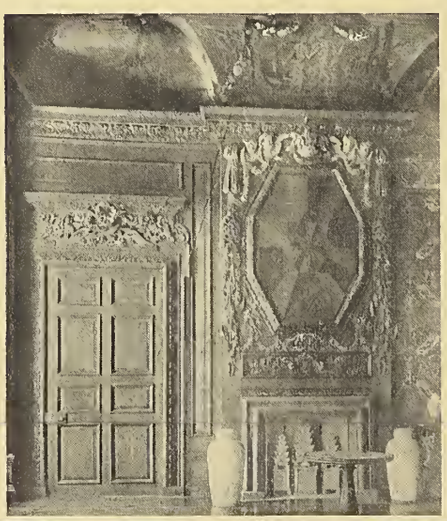
ARCHITECTURAL DETAIL REPRESENTING THE PERIOD OF THE ENGLISH RENAISSANCE



A characteristic Adam interior — the third gallery in Newby Hall



A splendid oak doorway carved ornamentation in fine restraint



Typical Gibbons carving of flowers, wreaths, fish, game and cherubs



Carved by Gibbons. It is interesting to note the very high relief



Holbein's King Hal in its Grinling Gibbons' setting at Petworth



A mantel by Inigo Jones who, early in the 17th century, was the leading figure in English architecture



A panel by Sir Christopher Wren, that is cold and hard, lacking the charm of Gibbons' work



The reredos of Trinity College, Oxford, showing two common carved decorations, one where the modeling is applied in a light color

The Real Meaning and Use of Architectural Detail

II. THE ENGLISH RENAISSANCE—THE WORK OF INIGO JONES, SIR CHRISTOPHER WREN, GRINLING GIBBONS AND THE BROTHERS ADAM—A PERIOD DIRECTLY BACK OF OUR OWN COLONIAL WORK

BY LOUIS BOYNTON

[*A series of articles by prominent architects appeared in this magazine last year. In it the characteristics of the more common architectural styles, used for country houses, were outlined and explained. Another matter of great importance to those who would build consistently is the detail. Mr. Boynton's series of articles will explain the origin and use of motives, ornament and molding characteristics in connection with the better known styles of architecture. The first article appeared in the January issue and dealt with the detail of Colonial times.*—EDITOR.]

THE ornament and decoration of the Colonial or Georgian period, which we considered in the January number, was a direct development of the earlier work of the English Renaissance, so that it seems natural to consider, in turn, this period and its tendencies, which directly and indirectly produced the early American work.

Early in the seventeenth century, the leaning towards the Italian design, the influence of which has been felt for a long time, culminated in the work of Inigo Jones, who was the first English architect to really assimilate the style. Previous to this time there had been a growing use of Italian detail, but it was applied to Gothic or Elizabethan forms and did not constitute a style, but rather marked the transition from the Gothic to the Renaissance. There are very interesting examples of Italian pilaster ornament applied to the piers of an otherwise Gothic building, as at Christchurch, Hampshire; and the mixture of styles produces a very curious and distinctly disagreeable effect.

Up to the end of the sixteenth century, the tendency in interior work, was to cover the walls with small wood panels, which took the place of tapestry and served rather as a background than as conscious decoration. With the advent of Inigo Jones, a fresh impulse was given to decorative woodwork and from that time the walls of a room—at least in the more sumptuous houses—were treated in a more decorative way, with panels and ornament, so as to make an almost complete effect without the use of pictures or hangings.

Inigo Jones was the son of an artisan and little is known about his early history. However, in some way he was able to spend considerable time in Italy, where he probably worked as a designer and came under the influence of Paladio. He returned to England soon after sixteen hundred and spent the next ten or twelve years, largely, in designing the settings for the elaborate masks, or outdoor pageants, which it was the custom of the rich nobles to give. He made interesting drawings of some extremely sumptuous settings for these pageants, and it is said that he completely revolutionized the scenery and the entire stage setting of the English theatre.

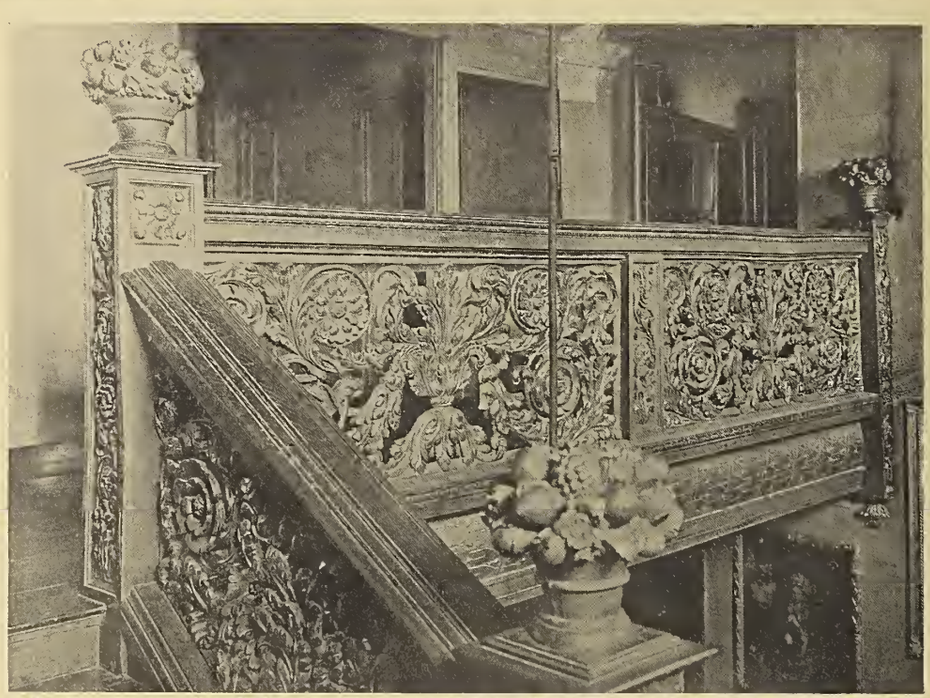
In the days of Shakespeare, there was no scenery as we understand the term. In fact, the stage was entirely open on the sides, with galleries extending to the back. Jones changed all this and introduced the proscenium, movable scenery, and a more adequate stage lighting.

After about twelve years he went again to Italy and on his return to England, where he was by this time well known at Court, he was appointed architect for a royal palace. From this time on he rapidly rose to the most prominent position as an architect and was appointed to the place of Surveyor of the King's Works, or Official Architect.

In his decorative detail his work shows an intimate knowledge of the Italian design, especially as regards contemporary work. There are drawings of mantels, interiors, etc., which show a real mastery of such design. It is believed that his work, like that of his immediate successors, was worked out in the process of construction and that instead of making elabo-



Carved and pierced detail in stair-rail of Forde Abbey, Dorsetshire—a form of decoration permitting the sumptuous adornment of both sides



Another example of the combination of carved and pierced decoration—a detail of the gallery on the third floor, Tyttenhanger, Hertfordshire. Wren and Gibbons used this general type

rate drawings, he kept in close touch with the work and solved the problems of design and building as they arose. In any case his buildings always look much better than the drawings would lead one to expect.

After Jones there was an hiatus, until Christopher Wren came into prominence. For, curiously enough, notwithstanding the great amount of work which Inigo Jones executed, he did not found a school of architecture, nor train any men to carry on his work in the same spirit. There were one or two men who had worked with him, but who lacked his fine perception and knowledge. They imitated his work rather stupidly, without getting the quality which he was able to give it.

Sir Christopher Wren had little or no training as a designer, except what he got from the study and execution of his own work. He spent a few months in Paris in his youth and studied there, and in consequence his design was based rather on the French than on the Italian traditions.



An excellent example of the work of Grinling Gibbons—known best for these carved garlands and pendants of flowers, ribbons and symbols

He was, however, a man of such commanding genius that he became a really great architect and designed some buildings that were not only notable, but important as works of art. He finished and developed the Chelsea Hospital, which was built for a royal palace, and which Inigo Jones had started. Wren, however, lacked the intimate knowledge of detail which Jones had; and, while his ornament was almost always in good scale—that is, its size in correct relation to its position and surroundings—it lacked charm, and he was apt to leave its execution largely to the workmen. Considering the enormous amount of work he did, this is not surprising, for besides building a large number of luxurious houses, or palaces, as they would be called on the Continent, he designed and built some thirty-five parish churches after the great London fire, besides rebuilding St. Paul's Cathedral.

He was doubtless thankful to make use of Grinling Gibbons, when he was introduced to this remarkable genius by John Evelyn. Gibbons was of Dutch descent, and after some vicissitudes, and being apprenticed to a trade in London, he was discovered by Evelyn making an elaborate reproduction, in carved wood, of a decorative Raphael in a rich frame. Evelyn was so much pleased with the work that he introduced Wren and his friend Pepys to Gibbons, and asked Wren to give him work.

Gibbons and his followers did an immense amount of work in a rather novel style. He was most famous for his garlands and trophies, drops or pendants composed of flowers, ribbons and symbols. These usually comprised fruit and leaves with game and musical instruments or whatever seemed most appropriate to the place, and had their origin from the practice of hanging up trophies of war or the chase. This motive gradually came to have a wide significance, and is dated as far back as Roman times.

About this time there came to be a more or less distinct separation between the carvers and the joiners—that is, between the men who did the wood paneling or cabinet work, and those who carved the ornament. As a result of this, perhaps, the ornament was often carved of box or some other light colored wood and applied on a background of dark oak or walnut, so that the decoration stood out very conspicuously. However, the effect is harmonious and often the interest is heightened by the difference



A mantel of marble and steel in the drawing-room, Rushton Hall, Northamptonshire—the work of the brothers Adam



Another Adam mantel. It is interesting to note how clearly these mantels are the inspiration of our own Colonial work

in color, as shown herewith.

The decoration of the moldings is very ornate, and much ingenuity was displayed in using natural forms, such as leaves and even fruit and flowers, on the projecting moldings.

One very interesting characteristic feature of this work was the use of pierced carving. A panel or stair-rail was carved with the spaces between the ornamental forms pierced through so that the decoration was repeated on both sides. In much of the work a great deal of ability was displayed in the design as well as ingenuity in carrying it out.



Detail of another Adam mantel which shows the influence of Pompeiian excavations. These had a marked effect just after 1750

While much of the ornament popularly ascribed to Grinling Gibbons was not done by him, he seems to have started a school of decoration, which was followed throughout England and which is, on the whole, the most satisfactory and best designed work of such a sumptuous character.

This work was more or less successfully followed down to the time of the Brothers Robert and James Adam. There were four brothers who worked together, Robert, however, seems to have been the designer and to have dominated the others. Their father was a noted Scotch architect, who held an important official position. Robert Adam was highly educated, and had studied the classical work in Italy, and had even published a monograph on the Palace of Diocletian at Spalatro. He chose to study this building because of its domestic character, as he believed English architecture had been too much dominated and influenced by the more monumental Roman work, such as the great baths, etc.



A corner of a representative Adam drawing-room. Thin ornament was accentuated by a background of different tone or color

About the year 1750 the excavation of Pompeii was undertaken, and the discovery of this work had a marked effect on architecture and more especially on decoration throughout Europe.

The work of the brothers Adam was very strongly influenced by these discoveries and had much of the Pompeiian character and curiously foreshadowed the Empire style in France. In fact they published an elaborate book of plates in 1773, with text both in English and French, and it seems almost certain that the French designers of the Empire period had access to their books and made free use of their motives.

From this work the Georgian was evolved, and it is very interesting to see the survival in American Colonial mantels of motives which were originally taken from or inspired by the discoveries at Pompeii.

This is particularly noticeable in the introduction of panels with figures below the shelf in mantels and above doors. Also the "reed" ornament around openings, which they often used, survived in Colonial work very noticeably. They frequently used flutes instead of reeds, but the general effect was much the same and the motive, horizontal lines to fill a space surrounding an opening, was, I believe, original with them.

In the Adams' work the fine, and at times thin, ornament, was usually accentuated by placing it on a background of another and darker color. This may have been suggested by the Gibbons work. In the Adams work, however, the difference in color was very subtle. The ornament was usually white, or a very pale gray, on a background of slightly darker gray—or perhaps a pale pinkish tone.

The brothers Adam were interested in, and in fact controlled,

(*Continued on page* 112)



Captain Ball always insisted upon having his bean poles in place before planting the crop



And the Captain's beans grew luxuriantly, but his success was dimmed by a bean support of the Newcomer's

A Vegetable Garden Contest and Its Lessons

THE MAKING OF A SUCCESSFUL GARDEN AND THE INGENIOUS METHODS AND SHORT CUTS BY WHICH IT PROVED ITS SUPERIORITY OVER ITS NEIGHBORS

BY CHARLES A. HARTLEY

IN a little town, which nestles in a friendly elbow of the Ohio River, a spirited vegetable garden contest took place during the summer of 1910. It was strictly an old man's game, the three contestants ranging in ages from fifty-five to sixty-five years. The prize was the honor of having the best vegetable garden in town.

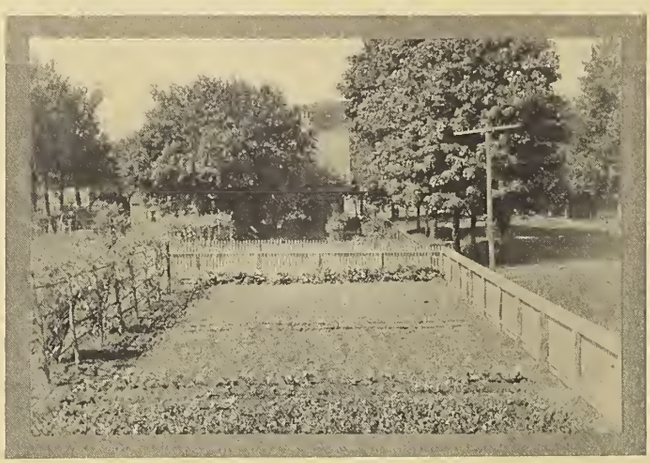
The contestants were Captain Ball, a retired steamboatman, ex-Lieutenant Markham, an old soldier, and Charles Dunlap, a newcomer to the town. Each of the contestants had his garden thoroughly plowed in the fall, heavy coats of stable manure being turned under in each case. They agreed that stable manure was preferable to commercial fertilizers, even if it did bring weeds.

The Captain was noted for poles for everything that would climb—for beans and tomatoes in particular. He always planted his poles before he planted his crop. His explanation was that he had a better chance to get them in to suit him without having growing things in the way. The ex-soldier, known in the neighborhood as the Early Bean Man, was noted as a stickler for straight rows. The Newcomer, as he came to be called, was the unknown quantity in the problem. He had to be tested in the balance, as his actions were strange. The fall before he had a half dozen loads of silt hauled up from the river shore and deposited in a pile just inside his garden fence. That was a rather mysterious movement, but he gave no explanation. He was also noticed carrying bundles of common plaster laths into his barn, where he sawed and hammered for a half day at a time. Upon this also he continued to keep silence.

The Captain and the Early Bean Man belonged to the intensive garden class. They did not let an inch of ground go to waste, producing two, three and even four crops a season, in some instances, from the same ground. In this the Newcomer was planning to beat them at their own game, but he was careful not to divulge any of his plans.

Thus matters stood with the three contestants when May brought warmer weather. Captain Ball had spread his map of campaign out before the enemy. Anyone of experience could foresee his next move as well as if he had orally announced it. The Early Bean Man was just as open and easily read, but the Newcomer was still reticent.

From the beginning of May the three practically camped in their gardens. Every day they planted, hoed, coddled and coaxed. In conversation together they apparently showed all their methods, but really spoke general garden wisdom and said nothing of their pet hobbies. At the same time each one was determined to win, though he wouldn't show his enthusiasm for worlds.

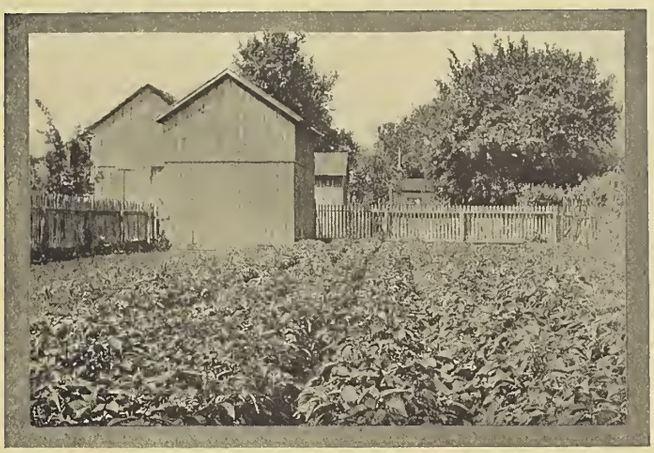


All the Newcomer's plantings were in rows, one, two and three feet apart, so that succession crops could be set in between

Their weighty discussions took on the appearance of a Socratic discourse attended by the throngs. The Captain would remark "It's an old and true saying, 'Treating your cow kindly brings best results.' Just as true with cabbage! To be a success a vegetable garden must be hoed every week, and it's much better if you do it twice, I say. The very moment the slightest crust

forms on top of the ground bust it up. Then don't go fussing with the ground when it's too wet. You'll do more harm in an hour than ten men can mend in a week,—packing it down and making clods underneath. Besides, tramping over wet ground takes the life out of it. Pick up a fistful of earth and ball it up. If it falls apart go on in and dig, but if the ball stays together the only digging it's safe to do is for fish worms behind the barn."

"Right you are, Cap'n," the old soldier would agree. "Any man with sense knows he's got no business with the vegetables when the leaves are wet. It burns 'em up if you get a hot sun during the day. Especially beans—it's death on beans to handle them wet. If you want to turn the soil, wait till evening,—but if you're after weeds, take the heat of the day. Then you've got them turned out and half dead before night dews can bring reinforcements and start a new growth."



During the previous fall the Newcomer had half a dozen loads of river silt brought up. In the trenches filled with this he produced a bumper crop of sweet potatoes

Occasionally the Newcomer would advance his views. "There are as many ways to hoe as there are politicians or preachers. It doesn't do any good to scrape daintily over the top; you've got to go deep. Get under, and you've a soil that just draws life right out of the air. What's necessary is to let the rain and dew and air get right in and help. It's as important as—well, a good bug remedy."

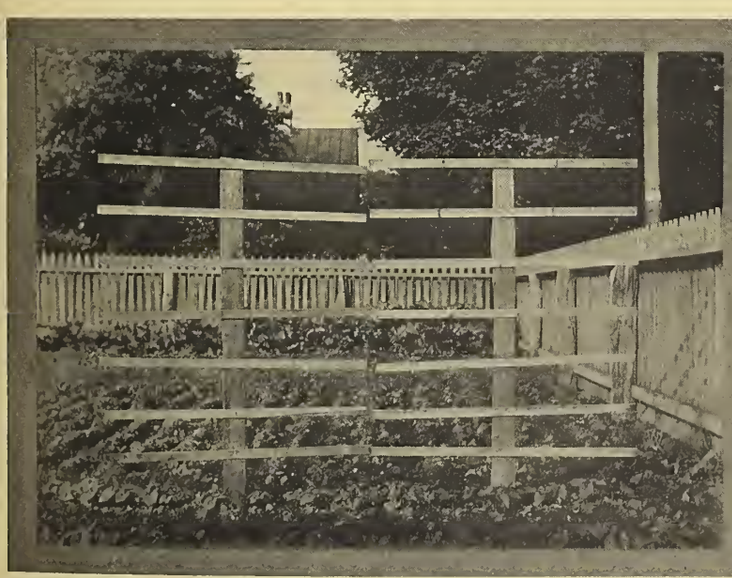
Thus the contestants in their wisdom; but all the time each practiced the little arts and tricks of agricultural coaxing which of themselves seem trivial, but which count in the end.

With the relenting sunshine and showers of May the contest took on added interest, and spectators began passing from one garden to another to keep in touch with their progress. The Captain and the Early Bean Man went boldly forward and laid out the unplanted portions of their gardens and planted them to potatoes, corn, cabbage, tomatoes, and so on. It was noticed that the Newcomer spaded, raked and made beds, but tomatoes and cabbages were conspicuously absent from his plantings, also that he planted his vine beans and Lima beans in drills, instead of in hills. It was found on investigation that he had planted his tomatoes and cabbages in old strawberry boxes, saved from the summer before, and had them placed in a sunny nook where they were sheltered from the night air. Large holes were cut in the bottoms of the frail boxes and paper laid over the holes before the boxes were filled with choice earth and the plants set. They grew twice as rapidly in this way as they would if set in the open. When the proper time came he carried the boxes to the garden. The tomatoes were set exactly three feet apart each way, holes being dug and the tops of the boxes being set a little lower than the surface of the ground. By this means the plants were not disturbed in the least by transplanting and went right on growing without interruption. The first roots pushed down through the holes cut in the bottoms of the boxes, and within a few weeks all the boxes had rotted and fallen apart so that they did not hinder the roots from spreading. In the bottoms of the holes dug for the reception of the boxes, manure had been placed long before, in liberal quantities and covered with earth. This tended to boost the plants along the moment the roots reached that stratum.

The cabbages were set in rows three feet apart and one and one-half feet apart in the row. No manure was placed directly at their roots.

All the Newcomer's plantings were in rows, one, two and three feet apart, so that later plantings of other vegetables could go in between. For instance, his early bunch beans were drilled in in rows three feet apart. That is about as wide again as is required, but between the rows after the beans had a good start he followed with a second or third planting of radishes. Beets for winter use were also started in this way and when they needed the space and air the beans were gone. This plan was also followed for late cabbages; as soon as one crop came out—or before that time—another went in. The large onion bed was planted to winter radishes as soon as the onions were harvested.

About the middle of May the purpose of the Newcomer's



The lath bean racks provided the newcomer with a largely increased surface exposed to sun and air



When the bean vines covered the lath frame there was a continuous wall of bearing surface



The Newcomer's tomato tables resulted in heavier vines and tomatoes that were free from blemish

Captain Ball's old-style tomato poles were far behind in their quantity and quality of the crop

sand pile was revealed. He dug long trenches about a foot wide and eight inches deep. Into these he wheeled his sand and filled them with it about level with the surface of the ground. On the sand he pulled a few inches of garden earth, making low, broad sweet potato ridges, and then went off about his other work until the earth settled. He had reached the conclusion that sweet potatoes do best in sandy soil, and he thought that if half of it were composed of rich river soil, with enough heavier soil above to keep the moisture down, they would do still better. Another thing he determined to do was to keep the vines pruned back, leaving them not more than eighteen inches in length. He had learned that if permitted to grow longer too much of the substance went to the vines at the expense of the potatoes themselves. He found, however, that this was easy to start but difficult to keep up. In the growing season sweet potato vines seem to lengthen a foot in a night.

The Captain looked over the fence and inspected the preparations for the sweet potatoes and shook his head. "I don't believe that'll pan out," he said.

"Ever try it?" the Newcomer replied.

"No, but your sand'll dry out, and it'll fail sure."

(*Continued on page* 112)

What Can Be Done With the Radiator

VARIOUS WAYS IN WHICH ITS STRICTLY UTILITARIAN AND BEAUTY-LACKING CHARACTER MAY BE IMPROVED OR AT LEAST MADE LESS OBTRUSIVE

BY SARAH LEYBURN COE

THE designer of a really beautiful radiator will not only confer a favor on the rest of the world but will doubtless make a fortune for himself. Just at present, as he has not yet materialized, a radiator is a radiator, and whether it is in a magnificent home or the humblest apartment, handsomely decorated or perfectly plain, the fact remains that it is an unsightly collection of metal pipes.

Of course any amount of ingenuity may be expended in making it as unobtrusive in appearance as possible, and there is a wide difference between the radiator that stands resplendent in gold or silver paint against a red wall and one that harmonizes in color with the decorations of the room in which it is placed. Very satisfactory results in the process of elimination may be obtained by the proper color treatment, particularly if the radiator is a tall one that stands flat against the wall and can be decorated to tone in well with the wall-paper. An enamel that is especially made for radiators and heating pipes comes in a wide range of colors and may be mixed to obtain any desired shade, and the radiator can either be made the exact color of the background of the paper, or if a two-toned effect is wanted the ornamental raised figures may be done in the same color as the figures in the wall-paper.

There are some persons, however, to whose artistic souls the humble radiator is an offense, no matter how carefully it may be relegated to the background, and nothing will satisfy them short of hiding it entirely. A considerable number of schemes for putting it out of sight have been devised, some of them quite ingenious and effective, but in following out any one of them it must be remembered that the heating capacity is greatly reduced in proportion to the amount of surface that is covered.

Architect and heating experts agree that the proper place for a radiator is in front of a window, as the outside air is thus heated as it comes into the room. This necessitates the use of the low radiator, which is less obtrusive in appearance, has a larger horizontal surface and consequently gives out a greater radiation of heat near the floor than a high one. In placing it in a large window, too, a number of sections can be put together to fit any shape.

The most satisfactory method of disguising the heating arrangements is to use the low radiators and cover them with window seats, or to build them into the walls underneath the window sills. In either case the fact that an enormous amount of heat is wasted must be taken into consideration. When a

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One way of making less conspicuous the dining-room radiator is by means of this sort of a serving table

window seat is built over a radiator a layer of non-conducting asbestos between the two is necessary, otherwise it would be too warm to be comfortable. Panels of cane or metal openwork in the front of the seat, however, allow free passage of the heat.

This window seat arrangement may be as elaborate or as plain as the furnishings of a room demand. In the big, comfortable living-room of a country house reconstructed on modern lines there is an enormous window recess, possibly twelve feet wide and three feet deep, entirely filled in with a low radiator, over which is a window-seat about a foot lower than the casement windows. The woodwork is perfectly plain and corresponds with the doors and the ceiling beams. There are large cane panels, a thick soft cushion and piles of pillows that give unlimited comfort.

Following out the same idea, the white and gold Louis XIV salon in a newly decorated studio apartment has a radiator-window seat in white and gold that matches the furnishings of the room perfectly, even to the pink brocade cushion and the delicately painted panels that alternate with the necessary cane ones.

When a window seat over a radiator is not practicable a broad shelf is sometimes built over it flush with the window sill, but this too must be protected by a layer of asbestos if it is to be of real service as a shelf.

If every bit of available heat must be made use of and there is a large projecting window in the room, a small seat built at either side with the uncovered radiator filling in the space between is not a bad scheme, and while it is a rather poor makeshift for an ingle-nook it is at least comfortable and rather attractive.



A projection of the window-sill throws into semi-obscurity this dining-room radiator

Another way of disguising the radiator, one that is neither so elaborate nor expensive as the built-in window seat, is particularly suitable for the ordinary narrow window. This consists of a wooden case built over the radiator, to be used as a seat, if desired. The ends are solid, but the front is cut out, giving the appearance of a bench placed over the radiator, and at either side of this opening are hung draperies of silk or cretonne or any desired material, leaving a portion of the pipes visible in the center. In this way the radiator is fairly well hidden, but its capacity for throwing out heat is not so seriously interfered with as when the front is entirely closed over.

For bedrooms a pretty arrangement is the broad, rather low, radiator with a shelf over the top. This shelf is covered with material to match the hangings in the room, and from a small brass rod fastened to the lower edge there hang little curtains that reach to the floor. They are wide enough to be drawn together in front, hiding the radiator entirely, or if desired they may be drawn back in order to give out more heat.



A special radiator enamel is now obtainable so that the iron can be made to match the color of woodwork or wall covering

Screens around radiators are used with good effect where more elaborate coverings are not practicable. They should of course be rather light in weight, with a covering of quite thin texture, so that too much heat will not be shut off. A screen designed especially for such use is of willow in an openwork pattern that may be stained any desired color and lined with thin silk to match. These screens can be had to order in any specified height and width, and are usually made with two or three leaves so that they can be folded and put aside when necessary.

A decidedly new invention for the elimination of the radiator is a porcelain cover that has yet to prove its usefulness and popularity, although it seems to fill all of the necessary requirements. It is made to fit over and around the radiator and is set flat against the wall, covering it completely. Filling in most of the space in the front and sides are openwork panels with colored decorations in the shape of conventionalized flowers between them. A broad band of polished brass finishes the bottom, and on either side at the top is a small brass door through which the heat may be regulated.

All sorts of ingenious methods are resorted to in meeting the radiator problem, and even the awkward looking tall ones may be at least partially hidden. One householder who was obliged to have a large radiator in a conspicuous place in the dining-room had a serving stand made, just the height and width of the radiator, (*Continued on page 114*)



Set in a recess under the sill, a radiator loses a large part of its efficiency







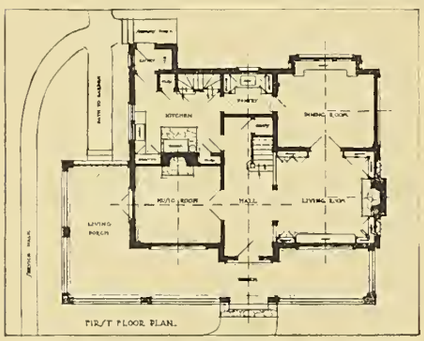
A CENTURY AND A QUARTER OF PROGRESS

The upper picture is of a Litchfield (Mass.) homestead, built in 1775. Below is a modern home at Glen Ridge in which the architect has evidently tried to hold the character of Colonial work. Have we gone forward in 125 years?





Rough texture stucco of a light tan color is in attractive contrast with darker brown shingles, blinds and woodwork

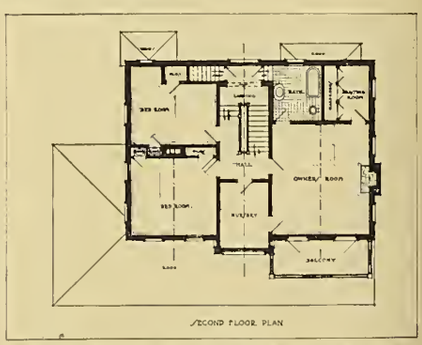


This generous allotment of porch space is conducive to out-door life

THE HOME OF H. H. PITTINGER, NETHERWOOD, N. J.



Stained cypress is used for the entrance hall woodwork

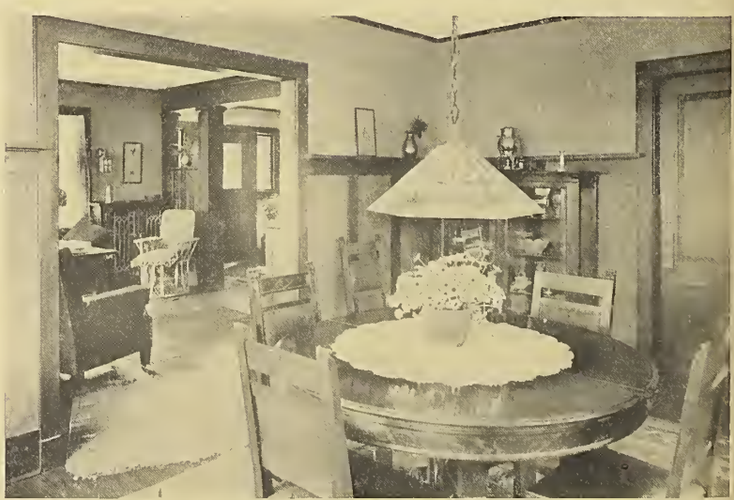


The balcony that can be used as a sleeping-porch is an attraction

Hollingsworth & Bragdon, architects



A stone fireplace strikes the note of informality, the walls and woodwork being so treated that its mass is toned down



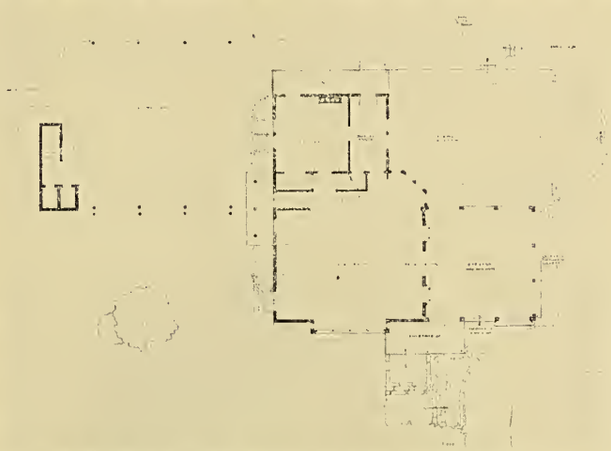
A Southeastern exposure allows plenty of sunlight to enter the dining-room, and makes it warm and cheery in the morning



"The Fold" is practically a one-room dwelling on the ground floor, for besides the kitchen there is only the great Main Room. This opens on a veranda, however, which is used all summer as a dining-room, and is really an integral part of the house



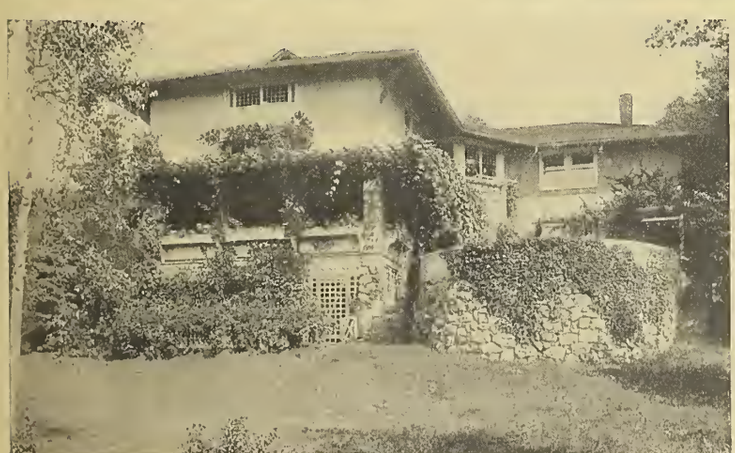
The flower garden is another extension of the living quarters



There is but a single flight of stairs in this house—the kitchen is connected with it at the platform level



The formal garden is intimately connected with the house

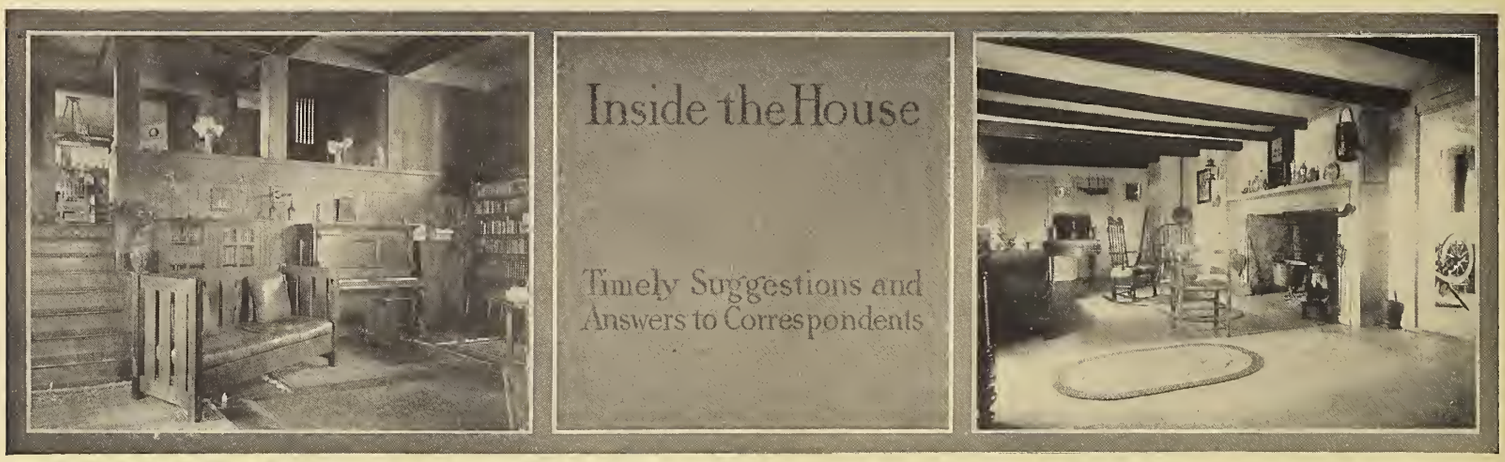


Beneath the veranda the slope of the site gives opportunity for a large play-room or work-room for the children



A feature well worthy of emulation is the awning-like projection of lattice-work over the porch railing, covered with vines

"THE FOLD"—SUMMER HOME OF C. R. AND ELLA CONDIE LAMB, CRESSKILL, N. J.



The Editor will gladly answer queries pertaining to individual problems of interior decoration and furnishing. When an immediate reply is desired, please enclose a self-addressed stamped envelope.

The Essential Chest

AN airtight, dustproof chest is an article of household utility that is too often overlooked in furnishing the home. It should be one of the *necessities,* not merely an ornament put to use—least of all a receptacle for gum boots. The old-fashioned "wedding-chest" idea is one to be encouraged, for besides urging the young girl to make and to save toward her own future home furnishing, it provides her with a most important article of furniture for present use.

It is essential that the chest be properly made. There are ready-made chests to be found, some very well constructed, but a chest made to order by a good carpenter is likely to give more pleasure, not only because its design and trimmings may be distinctive, but because one can watch and superintend the making.

Cedar is the most desirable of all woods for the utility chest, chiefly because of its imperviousness to insects. Old seamen's chests were always made of cedar or camphorwood — a wise precaution when exposed to the insects of many lands. A cedar chest made air-tight is an absolute preventive of insects of all kinds. This is especially true in regard to moths. It will save a lifetime of worry over the destruction of woolens and furs, and annoyances at the odor of camphor or camphor balls. Mice will not gnaw cedar, and damp will not penetrate. For winter use as well as for summer, cedar is very satisfactory. Handsome gowns may be laid in a chest with the absolute certainty that nothing, not even a speck of dust, will mar. As cedar is expensive nowadays, a plain cedar chest made of good three-quarter-inch wood, hand polished, is worth at least twenty dollars. A walnut, oak or mahogany chest, if a special wood appeals to you to correspond with other furnishings, may be lined with cedar wood, and thus have practically the same value as one of solid cedar.

The old English chests, usually made of walnut, were not decorated with much carving. If you buy an old chest in London and ask if the carving is old, the dealer will "size you up" before telling the truth—that the panels of the old chest have been removed and elaborate modern carving done thereon before replacing. Many of the old English chests stood on legs, which raised them from six inches to two feet above the floor.

The chest in the dining-room is well-nigh indispensable for table linen. Suitable trays or shelves can easily be arranged inside. The pungent, spicy odor of the cedar is a desirable fragrance not only in clothes but in linens—it is even preferred by many housekeepers to old lavender or rose leaves.

Colonial chests are trimmed with copper bands and studded with old-fashioned copper rivets, made to last for generations. Others are trimmed with carved molding and panels; sometimes with oxydized or dull copper, or hand-wrought iron bands. Often the initials or the monogram of the owner, hand-wrought in metal, are fastened to the top or front, and the lock and lid-stay are made strong enough to last for many generations.



The seat fits in beneath the telephone stand, and together they take up very little room

Book Blocks

BOOK blocks of wood, made with straight or curved Colonial lines, or carved to match any period furnishings, appeal to the housekeeper because of their simplicity, and the ease with which they are freed from dust. These blocks are heavily constructed to stand the strain of the row of books between them. They are an improvement on the regulation book-rack, as a pair of them form the complete rack. A unique pair is shown in mahogany, cut in the straight Colonial lines. In one end is set a small clock. Monograms, initials or crests are also inlaid in the ends, satinwood being the best wood for the purpose. The advantage of these blocks for the library, living-room or bedroom is that their holding capacity is limited only to the size of the table itself. They are iron weighted, but the wood is so smoothly polished that it does not mar the uncovered table. Eight dollars will purchase a handsome pair.

A Telephone Table

IN this age of telephones when several hours each week are spent receiver in hand, it is important that the telephone should be placed so that conversations may be held with comfort and convenience.

The accompanying illustration shows a three-cornered table. The projecting arm, which is on a pivot, supports the telephone, and can be swung to the desired position. The table itself is convenient for taking notes. The shelf below is made to hold the telephone book, etc. It fits snugly into a corner and takes up but little room; and together with the stool to match sells for $7.00.

The telephone corner can be made an attractive feature of a busy home. A useful item is a small blackboard hung above the table, on which can be recorded the messages left for the various members of the household. This can be made more prepossessing if the woodwork is stained, or a design burnt on it. A card giving the telephone numbers most frequently called, and those that might be needed in an emergency, should also be

hung in sight. Very attractive cards for this purpose are on the market and sell for a low figure.

A time-table is a convenient article in close proximity to the telephone. A pencil, of course, is a necessary accessory. To insure its being ever handy it is well to attach a string to it and fasten it by means of a screw-eye to the underneath side of the table top. A writing pad should also be at hand.

If a blackboard is not used, a board of soft wood, covered with burlap or denim, makes a convenient little board upon which messages can be fastened with thumb tacks and push pins. Those who make frequent use of the telephone will do well to consider the advisability of a carefully equipped telephone corner in the home.

Lazy Susans

"LAZY SUSAN" is a name to charm. It gives, however, no real hint as to its character, and no inkling of its sphere of usefulness, for Lazy Susan is an active worker. She is a cousin to the "curate's assistant" or English muffin stand. The Lazy Susan is composed of two circular wooden trays mounted on and revolving around a heavy wooden base and pivot. She is destined to occupy the center of the breakfast or supper table, and to hold whatever the hostess desires, passing it politely on her revolving trays. Lazy Susan may be made to pass the hot dishes around a small table, or she may hold only such things as the bread, toast, muffins, butter, cream, etc. In small families especially, a Lazy Susan is an important addition to the domestic help and often is indispensable on "days out." These stands come with either one or two shelves, each revolving on a separate axis, and can be found ready-made in plain oak and mahogany, and also handsomely inlaid.

Tea-tables, made after the pattern of the Lazy Susan, are also made in different woods, and solve the question of passing the cups and sandwiches in a charming and unique way.

A Nursery Rug

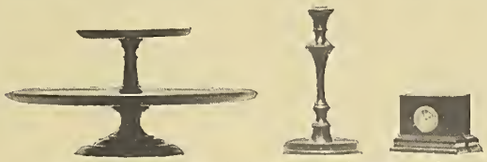
THE modern child is receiving much attention from the manufacturers. Wall papers are being specially designed, furniture specially constructed and even rugs are woven to please the little monarch of the nursery.

The accompanying illustration shows a hand-woven rag rug with a "jungle" poster boarder. A hippopotamus, a lion and an ostrich are in evidence. The rug itself is woven from new strips of cretonne and is washable, reversible and very durable. A rug 3 x 6 sells for about $3.25. These hand-woven rag rugs can be bought in all sizes up to 12 x 18.

The specially designed nursery rugs are desirable from a practical point of view and also because of their quaint appearance and the pleasure that is derived from them by small children.

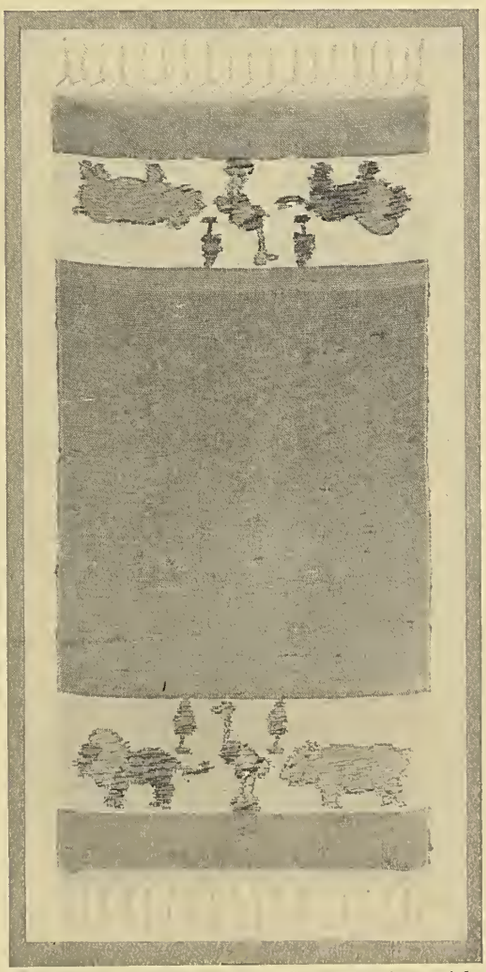
Candlesticks of Wood

SILVER and brass candlesticks will always hold their places in the affection of the householder and the collector; but to a great extent the wooden period candlestick has now taken the place of all but heirlooms. It is said that candlesticks appeal to a larger class of collectors than any other antique. The same may be said of the reproductions of the old



On the left is the helpful Lazy Susan, whose revolving trays pass the dishes at a small table. On the right is a pair of mahogany book-blocks, one of which is fitted with a small clock. The mahogany candlestick stands between them

styles. While in Colonial days the simple, straight candlesticks of silver, brass, copper, Sheffield plate and cut or molded glass, were common to every household, there was only an occasional mahogany candlestick cut by hand in the same straight and classic lines as those of metal. Today we have not only the mahogany Colonial candlestick, but the Colonial designs in any wood to match the room furnishings; and also enameled and hand painted with the dainty flower tracery that belongs essentially to the Adam period. The baluster pattern, as shown in the picture, is a true Colonial type, and lends a special dignity to the room decorated in that style. Simple girandoles, or branched candlesticks, can be made to order in mahogany or any suitable wood, to match the furniture of a period room. In purchasing a wooden candlestick, one knows just what one is buying. In purchasing the simple brass candlestick at four dollars or over, one is quite sure to be purchasing an imitation, as the market is flooded with them. Very few genuine pieces are to be found, and unless one has studied old candlesticks, one is apt to buy a reproduction which has been treated with acid, rolled, dented and scratched. A wood candlestick which is frankly a reproduction of a rare article is likely to be more satisfactory than brass.



A woven nursery rug, made attractive with animal figures. In 3 x 6 ft. size it costs $3.25

A New Table Bookcase

THIS miniature revolving bookcase is high enough to accommodate the average-sized book, and is a most useful adjunct to the library or living-room table. The rack sits upon a firm wooden base, and turns easily upon an iron piviot. The titles of the books are plainly visible, and they are compactly arranged instead of strewn at random over the table. These little bookstands are ornamental as well as useful; and especially so when made of a beautifully polished and grained wood. They come in all kinds of woods; in exquisite inlay they cost from $25.00 up.



A handy table bookcase that protects your books and is an ornament at the same time

To Clean Hard Wood Floors

FOR varnished floors a pailful of water in which from two to three tablespoonfuls of ammonia have been added is a harmless and effective cleanser. Scrub well and rinse with clear water, then rub and polish in the usual way. For badly stained waxed floors scrub with medium steel wool and turpentine. This can be bought at any hardware store. After the wax has been removed treat with fresh floor wax, applying with a weighted floor brush. Repeat this latter process until the holes and cracks are well filled, then polish with a soft cloth made into a bag to fit over the floor brush. Go over the floor at least every two weeks with a mixture of equal parts turpentine, sweet oil and vinegar rubbed well in as suggested above.



Garden Suggestions and Queries



Conducted by
F. F. Rockwell

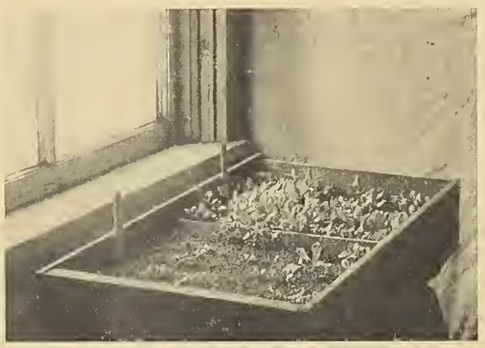
The Editor will be glad to answer subscribers' queries pertaining to individual problems connected with the garden and grounds. When a direct personal reply is desired please enclose a self-addressed stamped envelope.

February

THE days now are beginning to look a little more as if summer might possibly return again sometime. And with the melting snow, and the longer afternoons, there is more encouragement to begin actually doing something toward the garden. If you have not yet a coldframe or hotbed, read the suggestions in last month's department—and *act on them.* It is an easy matter to get the frame ready for the sash, and then if you haven't any artificial heat, such as a hot water pipe running through, or a flue *under,* the frames, use manure to supply heat, and after it has served this purpose, it will be in better shape to use on the garden than it was before. If you will take the slight trouble of *preparing* the manure, instead of trusting blindly to luck and taking it direct from the pile, results will be much more certain. Make a heap of the desired amount (it should be at least fifteen inches deep when put into the frames), and stack it in a compact form, taking out all coarse straw and litter. If it is very dry wet it down, but *don't* soak it, while the pile is being built up. Turn it two or three times in the course of a couple of weeks, being careful not to let it "firefang;" and then tramp it into the frames —which should be at least two feet deep— and cover with about four inches of well pulverized sod soil.

When a thermometer plunged into the soil *recedes* to seventy degrees, sow your seeds, either directly in the soil or in "flats," as you prefer.

If you have a cellar window on the south side of the house, you have an ideal opportunity of heating three or four sashes by building the frame over this window, and hinging it, so that air may be let in from the cellar. This can be done now, as the ground is probably not frozen hard in such a place, and it needs very little digging out—just making level, so that flats may rest evenly upon it. By making a cover of old carpet or bags for such a frame it may be kept to nearly forty degrees in windy zero weather, and will average high enough to be just right for starting cabbage and the more hardy vegetable and flower seeds, which, with proper management, may be followed by tomatoes, eggplant and the tenderer sorts of vegetables. If it is absolutely out of the question for you to make a hotbed or frame of this sort, then start a few flats of seed in the house; a high temperature will not be required. In any case, you will want a few coldframes handy to take the first lot of transplanted seedlings from the place in which they were started. Have these frames ready and the glass put on tight, so that they will be getting thawed out and warmed up ready for use.



Seedlings started in flats in the house do not need a high temperature

Starting Right

THE question of seed sowing is a perennial one—and an all-important one. In an article on "Starting Plants Indoors," which appeared in House & Garden last March, this is taken up in detail. But for new readers, and those who have not followed our advice of keeping every copy of the magazine for purposes of reference, brief directions are given here. Also, I have a new "wrinkle" in this seed starting business which has proved more successful with me than any other. Last fall, when every bit of garden soil about my place was ash-dry and I wanted to start immediately some seeds that were late in reaching me, I had to use some very clayey soil, that would have packed solid if watered on the surface in the ordinary way. I placed in the bottom of the seed flat about two inches of sphagnum moss, which was then soaked with water; this was covered to little more than half the remaining depth of the box with soil which was given as much water as it would *readily* absorb (the soil being quite dry, but the most moist I could get). The box was then leveled off and the seeds sown and covered without being watered at all—the surface left dry. In the course of a few hours the surface soil had come to just the right degree of moisture, absorbed from below, and remained in this condition, drawing upon the surplus contained by the moss until after the seeds were well up. Since then I have used this method regularly.

For those not familiar with the sowing of seeds, the following condensed instructions are given: Get some soap or cracker boxes, and saw them through lengthwise into "flats" about three inches deep, covering the bottoms with boards of the same material and making in these, if they are tight, seven or eight half-inch holes. Cover the bottoms with coarse screenings, or any coarse material, that will furnish drainage (or moss, as suggested above), and then fill the boxes level full with sifted soil, prepared of two parts of light loam and one each of leaf mould and coarse sand (if these ingredients are not handy, any light garden soil will do; don't quit for want of exactly the right thing); scatter the seed thinly and evenly, press in with a small piece of board or block, and cover *very* lightly—just so the seed cannot be seen. Give a thorough watering with a very fine spray, or through a folded piece of burlap, and place in a temperature of about fifty to sixty degrees for cabbage, etc., or sixty to eighty for eggplant, tomatoes, cucumbers and other heat-loving vegetables. If the boxes can be placed on top of return pipes, a boiler, or the back of a kitchen stove, so much the better, only be sure to remove them the moment the seeds break ground. Then place them near the light, and give a careful, thorough watering whenever the boxes dry out—not whenever you happen to think about it.

What Now?

HOW about that garden PLAN? Is it done yet? If not, get after it at once— for upon that depends so largely the real efficiency of your garden or the beauty of your grounds, as the case may be. If that plan isn't ready you are handi-

capped right now, for how, without it, are you going to know what seeds you need?—and they should be ordered at once if your list has not already been sent in. Stick to the standards! Order novelties by the packet only. Order from a reliable mail-order house—buy fresh seeds instead of gayly lithographed envelopes at some local store.

What to Plant Now

START the first lot of cabbage, lettuce, cauliflower, beets, kohl-rabi, and *onions* (early sowing and transplanting to the field makes more difference with them than with any vegetable I know). Artichokes are not so well known as they deserve; start a few now. Also celeriac and early celery—just a little. And while you are at it, two or three boxes more will hold a great number of flower seedlings. Start your favorite hardy annuals; include Phlox Drummondi, calliopsis and *pansies*. Don't buy a dozen pansy plants in the spring from the florist, which are in the last stages of bloom, but start a hundred nice, thrifty plants for yourself. They grow like weeds when once transplanted, and want very little heat.

About the Grounds

ARE your shrubs and fruit trees all pruned? If not, finish them up now before warmer weather calls you off to other things. Remember that some shrubs flower on the old wood; these should not be cut until just *after* they get through blossoming. The fruit trees should be put in shape, and sprayed. Walks, culverts, newly seeded or sodded spots, and trees or shrubs set last fall should be attended to. Plan now what new shrubs and vines are wanted, and get them in early. Don't loaf, for improvements are possible on even the smallest place.

Are You Buying Fruit?

FRUIT, in proportion to its importance, is more neglected than anything else about the small place. I suppose one reason is that the methods of fruit culture are not so well nor widely known as those of vegetables or flowers, and that the return for the expense and care involved is not so immediate. But what a rich dividend it is when declared! It is worth working and waiting for if anything in gardening is. There is not much that the ground yields us which gives greater pleasure through the winter than the apple barrel—to say nothing of peaches, pears and plums in profusion in their season. These are better than you can buy, because ripened on the trees, and stored without shipping and bruising and cold storage. Fruit culture, once understood, is *not* difficult. Further, it is *not expensive*—a few dollars' worth of trees (which can be purchased for from fifteen to fifty cents each, according to sort and size), will, after a few years, pay an annual return of more than one hundred per cent.—counting the pleasure as a by-product not credited on the account.

Forsythia in Winter

THE trimming of forsythia has been done at various times of the season, fall, winter and spring, with no other definite purpose than to make it appear well-groomed when summer comes. Half the pleasure that might be had from it is destroyed by not knowing other results that may be had with but little or no trouble. Practically every twig that is clipped from the bush, if properly placed in a jar or can of water and allowed to stand in the cellar for two weeks, will bring out the blossoms as rich and glorious as when they appear on the shrubs in the early spring.

There is absolutely no reason why those who own forsythias should not have a bouquet of these blossoms throughout the winter months. Trim your bushes as you want your bouquets, and you will find that the shrub thrives as well under this treatment as if it were completely trimmed of its superfluous runners at any one time.

For several winters I have had constantly in evidence a beautiful bouquet of forsythia, dating from January first to the time when the shrub itself begins to bloom. Instead of trimming my bushes at one time, I have simply taken as many sprigs as I required to make up a bouquet to meet the demand, putting fresh sprays in the jar in the cellar, as the developed ones were taken to decorate the living-rooms.

B. B. Buck



Clip a few branches from your forsythia bush, and let them blossom indoors now



How one home-owner solved the problem of securing an effective and unobtrusive place for raising seedlings in the early spring. Unfortunately, not many houses have a roof of this form, but perhaps there is some other place about your own home in which you can build a garden under glass

Ingenious Devices

LABOR-SAVING SCHEMES AND SHORT CUTS IN THE HOUSE AND IN THE GARDEN

Bookcases for a Song

AN ingenious neighbor, when building her bungalow, had the carpenters simply leave certain sections of the wall in her living-room unlathed, and after the room was plastered, strips of flat molding were nailed around these openings as a frame. Then she inserted shelves; the result was the handiest kind of a bookcase.

The cases were made on inside walls on either side of the homelike fireplace so the house was not rendered any colder. When filled with neatly arranged books they gave the room a well furnished look at no expense whatever, and there was no heavy piece of furniture to move on sweeping day.

A similar opening in the wall of the bathroom makes a neat little medicine-closet, a dainty white curtain screening the bottles from view.

No space is taken from the room, and they are exceedingly convenient.

L. McC.

Shallow Drawers for Linen

IT looked strange to see in the linen-closet of a new house a row of drawers not over three inches in depth. These drawers, the owner explained, were expressly for the storing of fine table and bed linen.

"Did you ever notice," she asked, "that when a quantity of linen is placed in a deep drawer some of it is sure to be crumpled in getting out desired articles, and not infrequently must be sent to the laundry again before being used? Now, with these shallow drawers, only two or three articles are placed in each one, and all are kept in perfect condition."

A slip of paper was pasted on each drawer designating its contents, so that no confusion arose from the increased numbers.

ALICE M. ASHTON

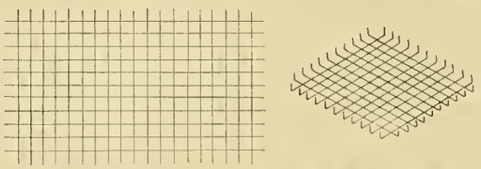
To Prevent Rust

OFTEN tools and metal work will rust though not exposed to the weather. Camphor gum seems to have the property of preventing rust, and oils of different kinds will protect metal. The best combination for preventing rust is made of tallow four parts, graphite two parts and camphor gum one part. The metal should be thoroughly cleaned and wiped dry, then the paste applied and allowed to remain twenty-four hours. It may then be wiped perfectly dry, and kept in constant use for months without fear of tarnish or rust. The mixture in some way penetrates the metal and prevents oxidation even under circumstances generally conducive to it.

H. F. G.

Mending Holes in Wire Screens

A HOLE in an expensive wire screen is an annoyance and somewhat costly to fix if the screen be of copper. But holes can be quickly repaired at home with little expense and without leaving any disfiguring marks. To do it, get a piece of wire gauze like that of which the screen is made. The piece should be a little larger than the hole. Then take off the wires around the edge of the patch until it appears surrounded by teeth one-eighth inch long. Bend all these projecting wires upward so as to be at right angles to the body of the gauze as in the cut.



The outside wires should be stripped off, as in the first drawing, leaving even projections around the edge; then bend these up in the manner shown

Now put the patch over the tear, allowing the turned-up wires to go through the screen. Press flush to the surface and bend the projecting points of wire toward the centre. A patch put on in this way is perfectly secure; the work is done in a minute, and is not noticeable.

W. E. P.

Rope Rails

IN a great many houses there is a staircase so narrow or so steep that there is no room to put in a hand-rail, or if there is one, its slope makes it of little service. A rope rail is not only the safest for these situations, but the most easily used; besides it takes up less room than any other kind. The hand has a better grip upon it and can slide, unobstructed by posts, along the entire length. The three-fourths or seven-eighths-inch, four-strand "bolt-rope," spliced through heavy screw-eyes makes the best kind of a rail. Any heavy rope will answer, but it is preferable to have it smooth and soft and above all, securely fastened and tight enough to prevent much "give."





The illustration shows a rope rail with an eye splice. If this cannot be made, run the rope through the screw eye, and tie enough large and tight knots to prevent pulling through

W. E. P.

To Drive Worms from Potted Ferns

MANY ferns refuse to grow, however well watered, because earth-worms infest the soil. If the plant can conveniently be re-potted, wash the roots clean by holding them under a hydrant, and then place in earth which has been baked in the oven to kill all the tiny grubs.

But if this cannot well be done at the time, simply stick a number of matches head-first into the dirt. The sulphur kills all life in it and the plant revives accordingly. Often worms will be found in the saucer, driven out by the sulphur.

L. McC.

For Stains in Marble

MARBLE statuary, garden ornaments of marble and other similar articles lose much of their beauty by their readiness to stain. Most of the ordinary spots can be removed by mixing a strong solution of potash with whiting and painting the mixture over the marble. Allow it to remain long enough to work into the surface, then wash it off. Iron stains must be rendered soluble by applying salts of lemon to them. For smoke stains it is often necessary to lay the marble face downward in damp sand, leaving just the top uncovered. The moisture of the sand then gradually penetrates the marble, driving impurities before it. The most persistent stain is sometimes taken out by the application of a paste of raw potato.

H. P.

Protecting Steam Pipes

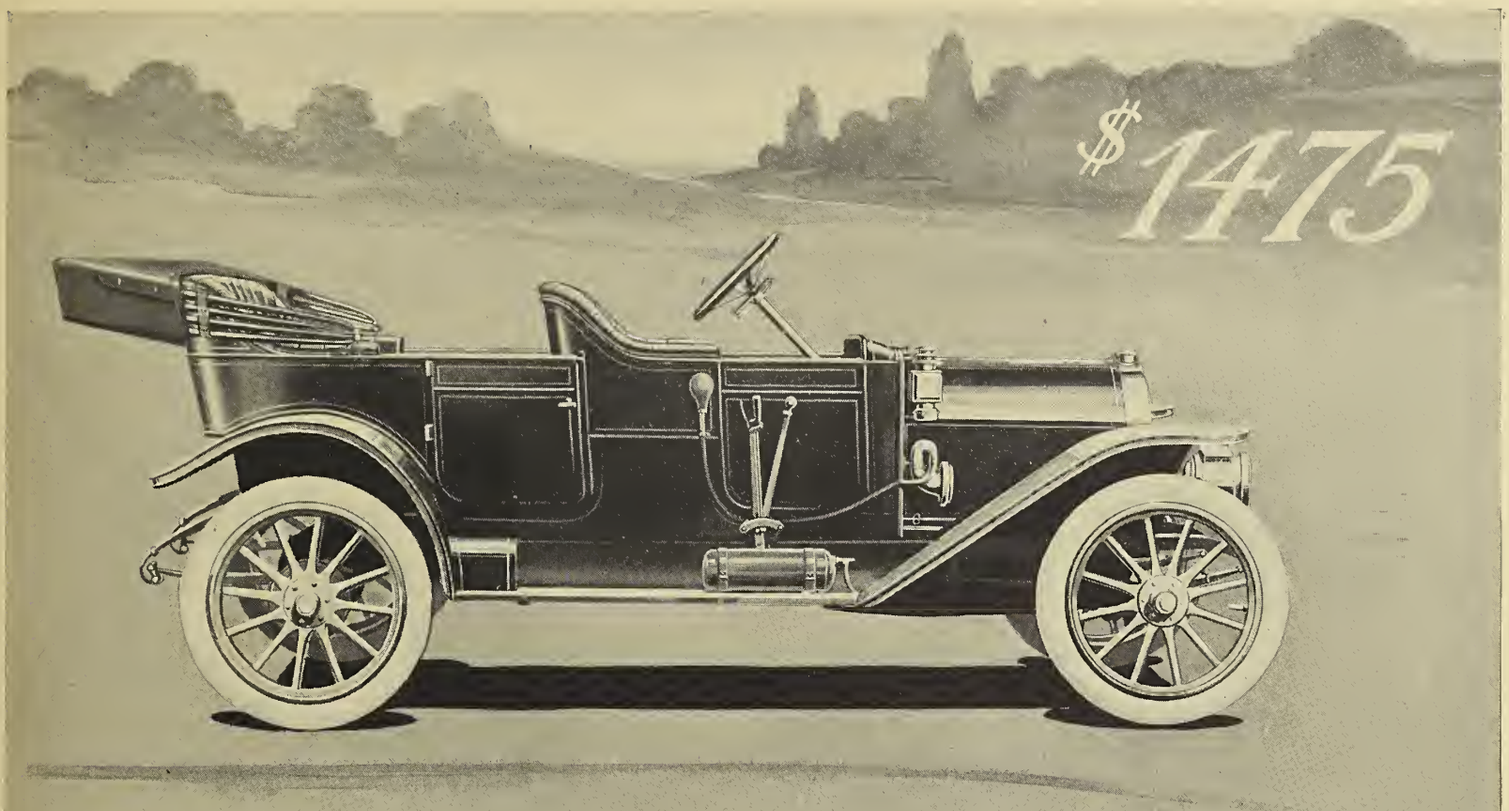
PEOPLE usually realize that all the pipes in a hot water heating system must be protected from freezing, because they are always filled with water, but they frequently forget that any pipes in the cellar of a house heated by a steam furnace are also filled with water up to the level of the water in the boiler. Of course upstairs there is never any water standing in the pipes in a steam system, and this makes them think there is no danger anywhere. I have seen part of the piping placed in a cold-room. There is danger also in cold parts of the cellar for the piping on cold winter nights when the fire in the heater is low. See to it that such exposed pipes are protected.

C. K. F.

A Bathroom Precaution

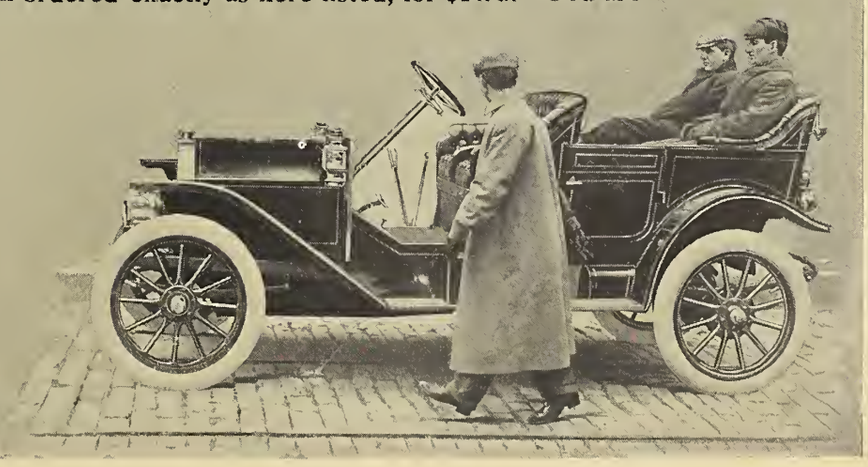
IN laying a new floor in our bathroom, the carpenter fastened down two of the boards with screws in place of nails. This, he explained, often saved a great deal of work in case any repairs had to be made in the plumbing. These boards can be lifted without injury to the floor and reset without any trouble.

A. M. A.



"Stoddard-20"

The surprise of the Automobile season is this 5-passenger, four-door Touring Car. Equipped also, if desired, with two-door body. Wheelbase 112 inches. Cylinders 4 x 4½. Splitdorf Magneto. Stromberg carburetor. Tires 32 x 3½. Price, two-door body, including robe-rail, generator, 5 lamps, horn, jack, tools and tire repair outfit (f. o. b. Dayton) $1275. We will furnish this model with a four-door body, equipped with Bosch magneto, 33 x 4 tires, Prest-O-Lite tank, and nickel-plated trimmings, together with full Pantasote top and top boot, when ordered exactly as here listed, for $1475. You are thus getting extra equipment which when listed separately makes a total of about $267, for only $200 in addition to the price of the car. This illustration below shows the driver WALKING beside his car while it is running on "high" gear, and throttled down close.



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WM. WARNER HARPER, Proprietor

The Real Meaning and Use of Architectural Detail

(*Continued from page* 97)

a stucco which they used on their houses. Unfortunately this has not withstood the ravages of time, and a great deal of their work, some of which was doubtless very interesting, has fallen into disrepair.

While the Adams' work was in no sense virile, and to a great extent merely fashionable, they did some really charming things, more especially in interior furnishing and decoration.

A Vegetable Garden and Its Lessons

(*Continued from page* 100).

The Newcomer went on, however, and put out just one hundred plants in ridges three feet apart and eight inches apart in the row. He was going to win or lose on sweet potatoes in that way.

When his Lima and Kentucky Wonder beans were ready to begin climbing the Newcomer unlocked his barn and brought out his first surprise, in the shape of a lath frame. Each was composed of a seven-foot piece of plank with seven laths nailed crosswise at regular intervals, fastening them in the middle. The plank was sharpened at one end so that it could be driven a foot in the ground. The planks were then set up with the ends of the lath just touching and making a continuous row. One row after another was placed in this way and then stiffened by nailing light strips crosswise, making the entire work strong enough to resist the winds of summer thunder storms. Mr. Dunlap, otherwise the Newcomer, had allied himself with the anti-pole school of gardeners. His theory was that beans need all the sunlight and air that they can get and that poles bunch and crowd them too much. His remedy for the "pole evil," as he termed it, was to give the beans an opportunity to grow all over his trellis-like framework and not limit them to climbing single poles. The inspecting public was favorably impressed with this new idea and did not hesitate to say so.

The Newcomer's second surprise was a new way of training tomato vines. When his beans had been supplied with climbing surface he again went to his barn and brought out a lot of contrivances which very much resembled drop-leaf kitchen tables. The framework was made of oak strips, an inch thick and three inches wide. Two laths were nailed on each side and five on top, making a table forty-eight inches long, thirty inches wide and thirty inches high. These tables he placed with a tomato plant at each leg, four plants to the table, and so arranged that he could walk all around each table. The young plants were first trained up the legs and then permitted to spread out on the top lath surface, giving them light and air from all sides and from below. This was an assault on the pole theory for toma-

toes which he objected to as he did bean poles—too much crowding and consequent shutting out of air and light.

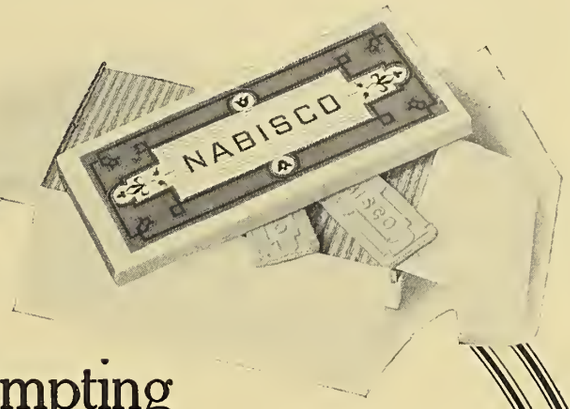
The public at once heartily endorsed the new idea of caring for tomatoes and a few rushed off and built racks on the same plan for their tomatoes. The Captain and the Early Bean Man had their poles out, however, and were reluctant to acknowledge the superiority of the new plan. It was found that each tomato table cost six cents for material and the bean racks about a like sum. It was conceded that by storing them under shelter in winter they would last five years, making the cost for each year but little more than one cent each—cheaper than poles, and when once made always ready.

The Newcomer pruned severely, starting the vines over the tops of the tables with a single stem for each plant. The suckers were carefully kept off.

Early summer was a continuous warfare with weeds started by the excessive rainfall from the seed brought in with the manure or from other sources. Morning-glory seeds, a great garden pest, are said to lie dormant in the ground for seven years and then spring up with great vigor at the first opportunity. Gympson weed seeds—that plant now happily almost eradicated by the despised potato beetle, is said to survive in the ground even longer than that.

Early in June the Early Bean Man met with a discouraging rebuff. Three successive boiling hot days, following a week of rain and cloudy weather, blighted his potatoes so badly that they died within a week. About that time, too, he discovered that he had planted the wrong kind of cabbages. He promptly pulled out what he had planted and put in a more desirable variety. This was enough to make a less determined man throw up the sponge, but he went bravely on making the best he could of the situation.

The Newcomer, too, had his troubles. On June 13th, unlucky day, when the contest was in full swing he fell from a cherry tree and fractured his left shoulder in two places. It then looked as if he would have to pull out of the contest and let the Captain come under the wire an easy winner; but the Newcomer was not made of that sort of stuff. It usually requires three months to heal a break of that character, one of the most difficult known to the medical profession to hold in position. Three days after the accident, however, the Newcomer was out, with his elbow bound firmly to his side and enough adhesive plaster criss-crossing his crippled shoulder to hold a kicking mule. He could not bend forward, but found a way to get at the weeds. Seated on a low, backless chair, he pulled weeds as far as he could reach and then hunched his chair along to a new spot. With the help of a light hoe, which he could handle with one hand, and a trowel, he kept at the fight every day. At first the public was inclined to pity him, but soon changed that to applause. They said that a man who had the grit to con-



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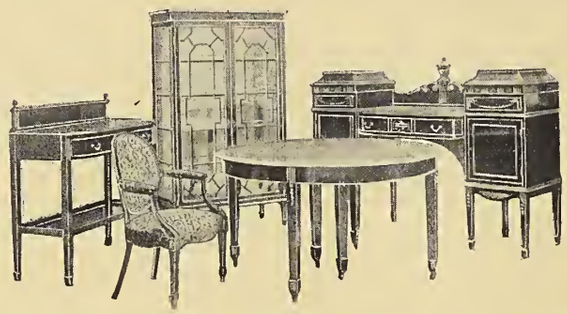
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tinue the contest against such great odds deserved to win.

In two weeks the Newcomer had the elbow of the crippled arm cut loose and was on his feet at work again, using the left hand simply as a guide for the hoe handle.

From then on to the end the race was swift and of rapid action. Gradually the Sunday inspecting parties drew toward the side of the Newcomer, but until early in September the race was nip-and-tuck between him and the Captain. It seemed a foregone conclusion at that time that the Newcomer would win. This became more evident on the last leg of the race, as an unexpected spurt on his part at last put him safely ahead. In the latitude where the contest took place a killing frost may be expected about the middle of September, followed by several weeks of delightful weather. At the first frost the garden season ends. Not so, however, with the Newcomer. He had saved all his corn fodder from his roasting-ear patch and, at the first hint of frost, made thin shocks of this fodder about each tomato table and constructed a roof of the same material over his bean racks. The result was that his tomatoes and beans went on undisturbed until freezing weather, weeks after the other gardens in town were shriveled and dry.

On one side of his garden he succeeded in growing four crops that season—potatoes, corn, turnips and rye—this last as a winter pasture for his poultry. The sand experiment for sweet potatoes was also a glowing success; great yellow fellows the size of smoked bologna sausages rolled out when he uncovered them.

On day the Captain and the Early Bean Man leaned over the fence and talked to the Newcomer as he cleared away the dead vines and other rubbish.

"We have come over to render a decision in the contest," said the Captain, soberly.

"I thought that was in the hands of the general public," replied the Newcomer, looking up from his work.

"Well, that may be true, but we've decided that ourselves," looking at the Early Bean Man, who nodded in the affirmative.

"What is it?" asked the Newcomer.

"You win," said the Captain with a chuckling laugh, at the same time extending his hand across the fence and heartily shaking the winner's hand. "Your tables and racks beat our poles. We give in."

What Can be Done With the Radiator

(*Continued from page* 101)

with three narrow shelves. It not only provides an excellent place for keeping things warm, but the lower shelves hold the coffee-percolator, tea-kettle, some cups and saucers and other articles not injured by the heat, and the background of steam pipes is hardly noticeable.

The radiator made especially for din-

ing-rooms, with a warming closet that occupies most of the upper part is a decided convenience, even if it is not ornamental. It has double doors and two shelves which can be removed when extra space is needed. A radiator of this type must of necessity be large in order to provide room for the space used by the warming closet, and of three column thickness, to give the required depth, for the closet must be spacious enough to hold large dishes if it is to be at all useful.

For the butler's pantry there is a device that serves the double purpose of radiator and plate warmer, in the shape of two or three sections of pipes placed horizontally on supports about eighteen inches apart, forming a succession of shelves.

The gas-steam radiator is still another invention that is convenient, but not pretty. It is a steam radiator with a small boiler attached, for which gas is the fuel used, and in appearance it is like any ordinary radiator with the exception of a perforated metal stand in which it is placed. A gas burner beneath the small boiler generates the steam, and heat is given out as from the regulation radiator. On account of the quickness with which it can be put into working order it is particularly useful as a supplementary heater in the spring and fall when the regular plant is not in commission.

How the Birds Benefit Garden and Orchard

(*Continued from page 93*)

we have due respect to their natural wildness, and place such homes in their favorite retreats, a little apart from houses and barns.

Another good way to attract birds is by putting out watering troughs for them in warm weather. A few will come to bathe, and nearly all will come to drink; and if open water in the vicinity is scarce one may thus attract to his premises nearly all the birds in the neighborhood. Needless to say, they will gather many insects as they come and go.

In an open garden it is a good plan for one to set a few posts. Upon these the birds will perch for the purpose of observing insects—kingbirds to watch for passing flies; bluejays to spy out grasshoppers and beetles; bluebirds to look for caterpillars; red-headed woodpeckers to watch for insects both on the ground and in the air.

In the winter a few food boxes will keep a number of birds about the premises. The ones that come to my boxes in the Missouri Valley are chickadees, white-breasted nuthatches, downy and hairy woodpeckers, bluejays, and occasionally a brown creeper. All of these will eat both suet and nuts. I do not chop up the suet, but leave it in chunks; nor do I pick the meats out of the nuts, but simply break them and throw in, shucks and all. Thus I leave the birds to do their own work, and it is intensely interesting to see them do it.



A Good Time to Paint

Much painting should be done this spring, whether linseed oil be slightly lower or slightly higher; for with the 1910 flax crop short it seems unreasonable to expect a return to the oil prices of a few years ago.

The thing to remember is that, though high, paint materials are not nearly so expensive as the repairing of a neglected house. Even oil at $1.00 or $1.25 makes the painting of the average house cost only $4 or $5 more than it used to cost. That isn't enough more to justify letting a $10,000 house, or even a $2,000 house, go to ruin. Paint it this spring. It will cost you less than later.

And use "Dutch Boy Painter" white lead and genuine linseed oil. People are tempted sometimes, when standard materials are high, to employ something inferior. A great mistake, because not true economy.

Moreover, the first cost of genuine "Dutch Boy Painter" white lead paint is not so great as you may have been led to believe. It may surprise you if you do a little figuring for yourself. Get from your local dealer prices on the following ingredients:



12½ lbs. "Dutch Boy Painter" white lead	$.....
½ gallon Pure linseed oil	
⅛ gallon Turpentine	
⅛ pint Turpentine drier	
This makes 1 gallon Genuine old-fashioned paint	

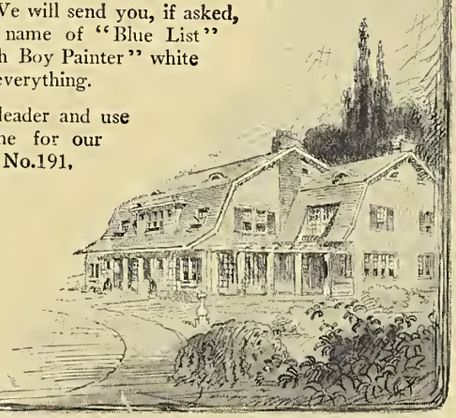


Compare this with the cost of any other paint you would think of using. You'll find the best is also the cheapest.

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We try to be of service to those about to paint. We will send you, if asked, color schemes, miscellaneous painting directions, and name of "Blue List" Painters in your community, men who use our "Dutch Boy Painter" white lead. Ask for "Helps No. 191" That will include everything.

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1 pkg. Petunia, Gregory's Finest Hybrid Mixture,	15c.
1 pkg. Candytuft, Gregory's Finest Mixed,	05c.
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1 pkg. Sweet Peas, Extra Choice Mixed,	05c.

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Landscape Gardening



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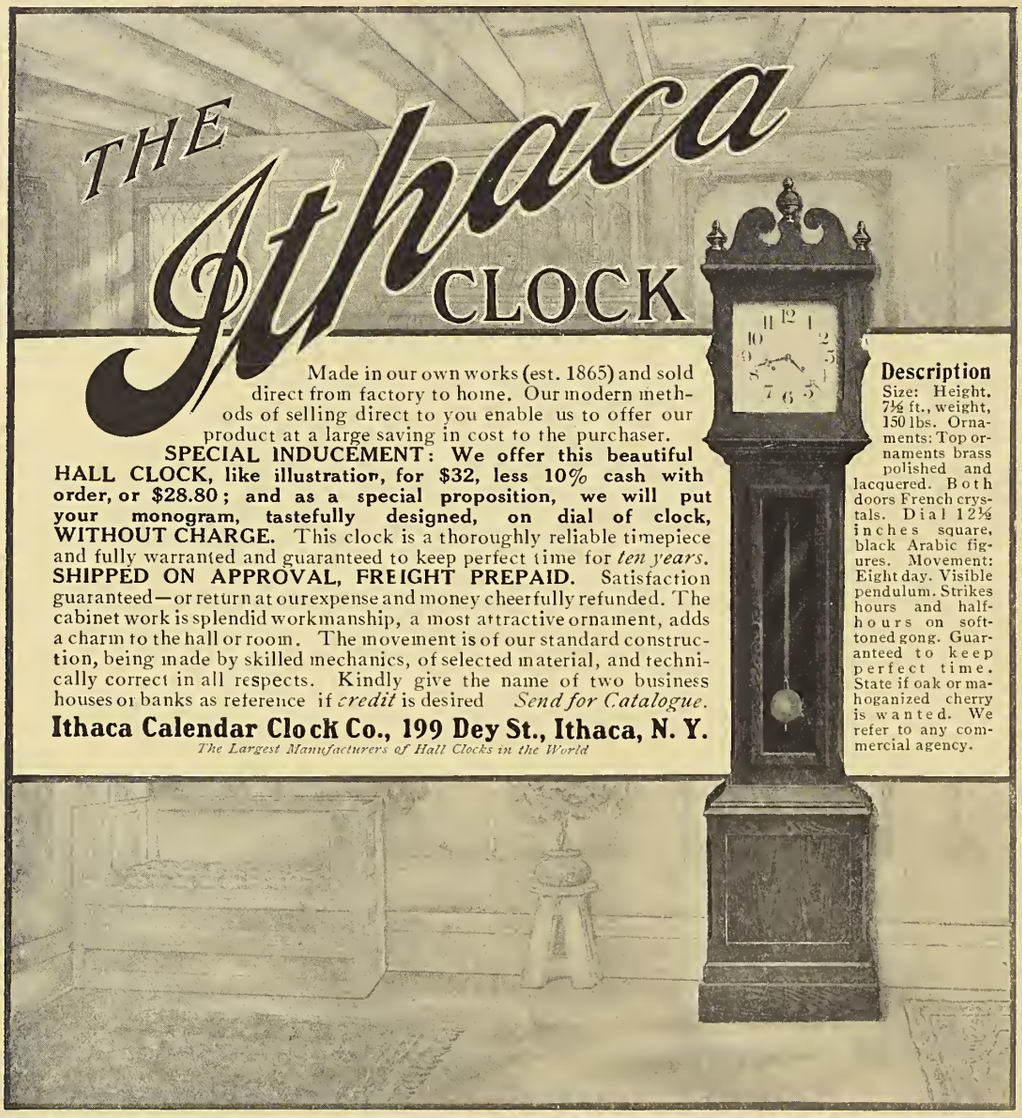
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Box 589 SIDNEY, OHIO Florists - Nurserymen - Landscape Gardeners

I am never satisfied until I have brought these birds to my window, where I can note their every action; but it is frequently necessary first to place the food box near some tree, and then gradually move it until it stands where it is under my eye as I work in my study. My box is placed upon a stake five feet high, which is made with a base so that I can move it as I desire.

If one's home be on the outskirts of town, and near timber, a little grain will bring tree sparrows and juncos, but neither of these birds remain with us during the summer, so that feeding them is a matter, not so much of profit to the garden, as of personal pleasure, and this pleasure is apt to be marred by the troublesome English sparrows.

It is with birds as with people those who would have friends must show themselves friendly. There are no better friends of orchard and garden than birds. The secret of bringing them to our help is to love them, and to provide for their needs.

Designing the Living-room by Itself

(*Continued from page* 88)

kitchen,—one ring for a maid—two rings for tea, or as the housewife may arrange.

The cost of the furniture used in this room, covered in cotton, made from the architect's drawings, would be as follows: 18th century sofa, rolled ends, $90; and it requires 3 1/6 yards of 50-inch goods to cover it. Low-boy with drawers, $90—size 2 ft. 6 in. x 4 ft. 6 in. Tip-top tea table, 38 in. in diameter, $60. Martha Washington wing chair, $54, in cotton; requires 5 yards of 50-inch goods to cover. Martha Washington armchair, $40, in cotton; requires 2 yards of 50-inch goods to cover. The crown ladder-back side chairs would cost about $35 each in cotton, and the armchair to match, $40.

The beamed ceiling, door and window casings, mantel and wainscot in the room would cost about $450. If the wainscot were omitted about $75 would be saved—the mantel and marble facing cost about $100 separately.

Grow Your Own Fruit

(*Continued from page* 91)

Margaret: Oblong, greenish, yellow to dull red.

Clapp Favorite: Very large, yellow pear. A great bearer and good keeper—where the children can't get at it.

Howell: A little later than the foregoing; large, bright yellow, strong-growing tree and big bearer.

Duchesse d'Angouleme: Large greenish yellow, sometimes reaching huge size; will average better than three-quarters of a pound. The quality, despite its size, is splendid.

Seckel: Small in size, but renowned for exquisite flavor—being probably the most universally admired of all.

Beurre Superfin: October, medium size, excellent quality.

Bartlett: The best known of all pears, and a universal favorite. Succeeds in nearly all sections.

Anjou: One of the best keepers, and very productive. One of the best in flavor, rich and vinous.

For trees of the standard type the following are worthy of note:

Congress (Souvenir du C.): A very large summer sort. Handsome.

Belle Lucrative: September to October.

Winter Nelis: Medium size, but of excellent quality and the longest keeper.

Kieffer: Very popular for its productiveness, strength of growth and exceptional quality for canning and preserving. Large fruit, if kept thinned. Should have a place in every home garden.

Josephine de Malines: Not a great yielder but of the very highest quality, being of the finest texture and tempting aroma.

PEACHES

Success with peaches also will depend largely upon getting varieties adapted to climate. The white-fleshed type is the hardiest, and best for eating; and the freestones are for most purposes, especially in the home garden, more desirable than the "clings."

Greensboro is the best early variety. Crawford is a universal favorite and goes well over a wide range of soil and climate. Champion is one of the best quality peaches and exceptionally hardy. Elberta, Ray, and Hague are other excellent sorts. Mayflower is the earliest sort yet introduced.

PLUMS

The available plums are of three classes — the natives, Europeans and Japans; the natives are the longest-lived, hardier in tree and blossom, and heavier bearers.

The best early is Milton; brilliant red, yellow and juicy flesh. Wildgoose and Whitaker are good seconds. Mrs. Cleveland is a later and larger sort, of finer quality. Three late-ripening plums of the finest quality, but not such prolific yielders, are Wayland, Benson and Reed, and where there is room for only a few trees, these will be best. They will need one tree of Newman or Prairie Flower with them to assure "setting" of the fruit. Of the Europeans, use Reine Claude (the best), Bradshaw or Shropshire. Damson is also good. The Japanese varieties should go on high ground and be thinned, especially during their first years. My first experience with Japanese plums convinced me that I had solved the plum problem; they bore loads of fruit, and were free from disease. That was five years ago. Last spring the last one was cut and burned. Had they been planted at the top of a small hill, instead of at the bottom, as they were, and restricted in their bearing, I know from later experience that they would still be producing fruit. The most satisfactory varieties of the Japanese type are Abun-



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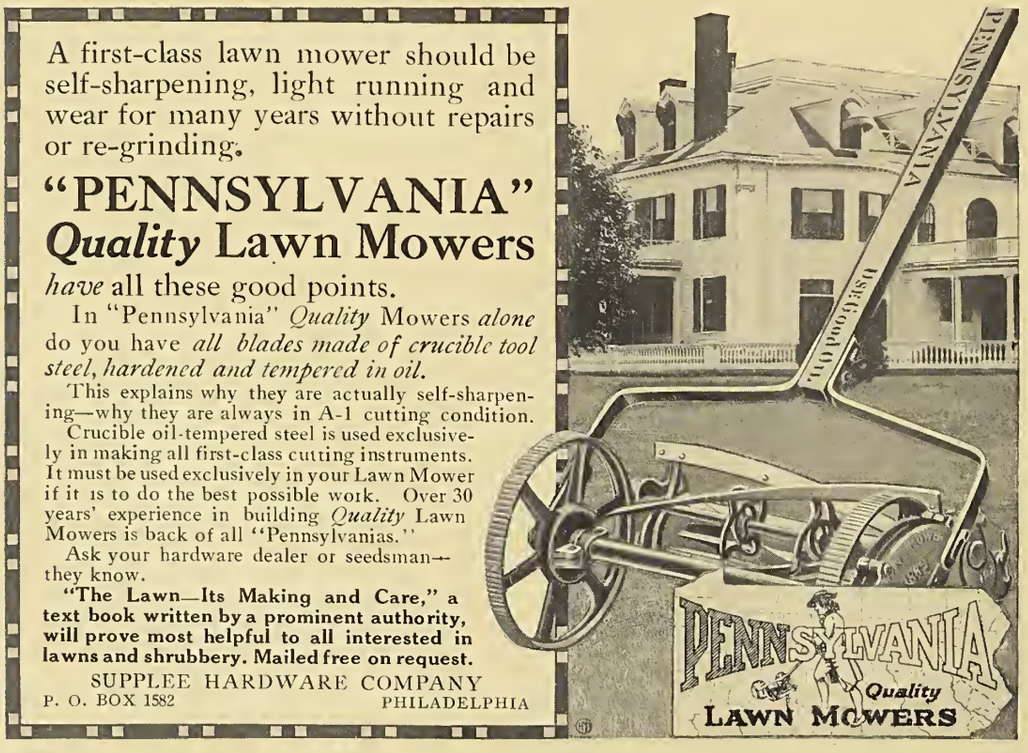
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dance and Red June. Burbank is also highly recommended.

CHERRIES

Cherries have one advantage over the other fruits—they give quicker returns. But, as far as my experience goes, they are not as long-lived. The "sour" type is hardier, at least north of New Jersey, than the "sweet." It will probably pay to try a few of the new and highly recommended varieties. Of the established sorts Early Richmond is a good early, to be followed by Montmorency and English Morello.

Windsor is a good sweet cherry, also Black Tartarian, Sox, Wood and Yellow Spanish.

All the varieties mentioned above are proved sorts. But the lists are being added to constantly, and where there is a "novelty" strongly recommended by a reliable nurseryman it will often pay to try it out—on a very small scale at first.

The Best Use of Brickwork

(*Continued from page 87*)

perts, was in a measure accidental and due to immediate exposure to a too fierce firing that melted the sand particles in which this particular sort of brick abounds.

The double-stretcher Flemish bond which, as its name denotes, consists of two stretchers together, followed by a single header in all courses, the headers being laid above the joints between the two stretchers in the course next below. It is coming more and more into vogue in America and has been used in some of our largest buildings with signal success. For the vertical joints between the contiguous stretchers, mortar colored to exactly match the bricks is often used, thus making a blind joint and giving the effect of one double-length stretcher. The use of double-stretcher Flemish bond sets a big, broad scale and can be employed to advantage in large wall surfaces, particularly where it is desired to take off somewhat from the appearance of height as the strongly marked horizontal lines have that effect. This feature can be further emphasized by slightly increasing the thickness of the horizontal mortar joints.

English bond and Dutch cross bond, like both the single-stretcher and double-stretcher Flemish bond, are replete with artistic feeling and deserve to be far more widely known and used than they now are in America. Not only are they essentially artistic, but they are strong and honest in structure. Both English bond and Dutch cross bond have alternate courses, the one wholly of stretchers and the next wholly of headers, but in the English bond the stretchers of all the courses come directly above each other, while, in the Dutch cross bond, the stretchers of the first and fifth courses break joints with the stretchers of the third and seventh courses respectively, and thus throughout, giving a half-invisible, diagonally diapered appearance if the mortar joints and the hue of the bricks be judiciously arranged. If

one chooses to put it so, running bond might be termed a degenerate form of Dutch cross bond with all the headers left out. Take out the alternate courses of headers and bring the courses of stretchers together and you have running bond. One is tempted to remark that this is only an example of its being but a step from the sublime to the ridiculous.

The bonds hitherto mentioned are the most usual kinds, although there are others and one also meets with special adaptations of recognized types, but it is quite sufficient for general purposes to remember the five enumerated. In fact, many people, who are supposed to have some knowledge of such matters, have difficulty in keeping the differences clear. Before leaving the subject, attention should be directed to two examples of walls built entirely of headers. In the Bryce house in Annapolis the vertical joints are broken and the effect is somewhat similar to the grains in an ear of Country Gentleman corn; in the Colony Club in New York, the vertical joints are unbroken and the effect is rather startling. One eminent architectural critic branded it as "immoral brickwork." Of course, it would be impossible for it to hold together were it not for the Portland cement in our modern mortar.

What the Period Styles Really Are

(*Continued from page* 84)

used in libraries and dining-rooms with most effective and dignified results.

The best period of the style of Louis XV is very beautiful and is delightfully suited to ball-rooms, small reception-rooms, boudoirs, and some bedrooms. In regard to these last one must use discretion, for one would not expect one's aged grandmother to take real comfort in one. Nor does this style appeal to one for use in a library, as its gayety and curves would not harmonize with the necessarily straight lines of the bookcases and rows of books. Any one of the other styles may be chosen for a library.

The English developed the dining-room in our modern sense of the word, while the French used small ante-chambers, or rooms that were used for other purposes between meals, and I suppose this is partly the reason we so often turn to an English ideal for one. There are many beautiful dining-rooms done in the styles of Louis XV and XVI, but they seem more like gala rooms and are usually distinctly formal in treatment. Georgian furniture, or as we so often say, Colonial, is especially well suited to our American life, as one can have a very simple room or one carried out in the most delightful detail. In either case the true feeling must be kept and no startling anachronisms should be allowed; radiators, for instance, should be hidden in window-seats. This same style may be used for any room in the house, and there are beautiful reproductions of Chippendale, Adam, Hepplewhite,

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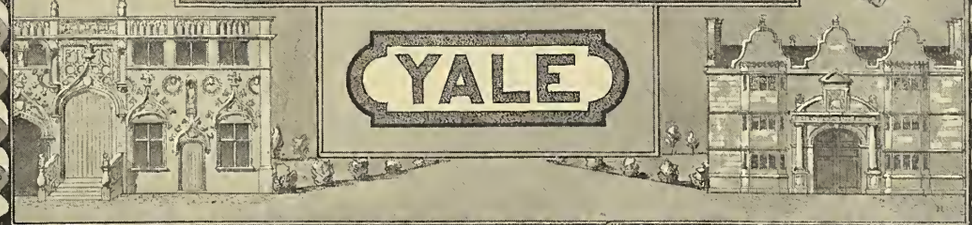
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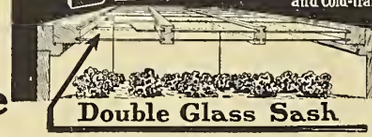
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In choosing new "old" furniture, do not buy any that has a bright and hideous finish. The great cabinetmakers and their followers used wax, or oil, and rubbed, rubbed, rubbed. This dull finish is imitated, but not equalled, by all good furniture makers, and the bright finish simply proclaims the cheap department store. Another thing to remember is that rocking-chairs are tabooed in all period styles. A rocking-chair should never occur in any well-regulated family.

There are beautiful stuffs made in appropriate designs for any period for wall—and furniture—covering and hangings; they are copies of old tapestries, brocades, cretones and chintzes. If one does not care to have the walls covered with a fabric there are wonderfully clever wall papers made that give the feeling of texture and are careful copies of old tapestries and other fabrics. Old designs in wallpapers are also copied.

The modern "Arts and Crafts" movement, and also that called "Art Nouveau," which must not be confused with the frightful work seen lately in many shops, are at their best in Europe, but many well-trained and truly artistic men and women both there and in this country are working faithfully to bring their ideas to perfection. Here, the furniture of this movement is chiefly "Mission," which is appropriate for houses of the bungalow and Craftsmen types. As I have said before, it should never be combined with the old styles if each is to do justice to itself. Willow furniture is another modern style that has great charm, especially for country houses.

Rooms that open into one another must be kept in the same period, or the rhyme and reason for it has gone. Rooms that are so placed that one cannot look from one to another may be treated in different styles. It is something to be thankful for that the fearful and amazing fashion has passed of having first a Dutch room, then a French one, then a Turkish "cozy corner," then an Indian room, and so on, until all the world was included in one small house, and one felt as jarred as if a flying trip had really been taken.

The Small California Garden

(*Continued from page* 81)

11. Pansies: They are all-the-year-bloomers, but must be grown in partial shade in summer. At other times they do well in a sunny bed, well enriched.

12. Stock: The cut-and-come-again varieties are admirable for winter bloom, lasting two to three months after the flowering once begins. Young plants brought from the nursery, and set out the last of September, bloom abundantly by Christmas.

13. Calendula: Another admirable winter bloomer. We sow the seeds in September or October in a sunny bed, and the rich orange-yellow flowers give a Midas

touch to that part of the garden all winter. As winter bloomers it is a strong point of both Calendula and Stock that no degree of frost to which Southern California is subject, damages them.

14. Chrysanthemums: In Southern California as in the East, the flowers *par excellence* of autumn; only in California they keep blooming well into the new year.

15. Cacti: We are fond of these prickly children of the sand, and numerous kinds thrive with a minimum of attention in our sunny climate. Many of our plants were raised from cuttings obtained during trips in the Southwest, and possess associations that make them doubly valuable. The Cactus bed is best if mound-shaped, so as to ensure perfect drainage, and small rocks should be strewn about on it. A Cactus dearly loves the company of a bit of rock.

The north side of the house, where the sun never shines, and which for that reason was at first looked upon by us as waste ground, has proven invaluable for ferns and begonias. Frosty winter nights make "hard sledding" for most varieties of the latter, and it is best to bring the tender sorts indoors before cold weather sets in, or at least cover them with sheets (supported on stakes so as not to weigh down the plants) every night on which the thermometer registers below 48° at 10 P. M.

The bare spaces about Southern California grounds, where one's Eastern training would suggest grass, makes a special problem, for grass is about the hardest and most expensive plant to keep growing in this land of little rain. Few but the millionaires, therefore, undertake to maintain more than a bit of lawn in front of the house—the rear spaces are treated otherwise, the main substitutes being *Lippia repens* and three species of Mesembryanthemum. Lippia, a Sicilian plant, forms a solid green mat over the ground, may be walked on like turf, and is kept neat by only an occasional mowing. It grows from cuttings readily, but is slower to make a solid cover than grass or clover. It possesses the great advantage, however, of living for months without water, but to look at its best it needs a thorough wetting down once every five or six weeks.

The mesembryanthemums are succulent, evergreen creepers even more indifferent to water than Lippia, and are invaluable for covering banks or bare spaces which are not to be walked on. The most desirable is a small-leaved, pink-flowered variety which blooms in April and May, the flowers so closely set that they make an unbroken sheet of pink that hides the entire mass of foliage. A larger-leaved variety, with large cerise blossoms, is even more dazzling, and besides its great annual blossoming, which is in summer, bears scattering bloom throughout the year.

Both Lippia and mesembryanthemums have the merit of costing you absolutely nothing in a section where they grow at all, for any one is glad to give slips away.

The season that tries the amateur gar-



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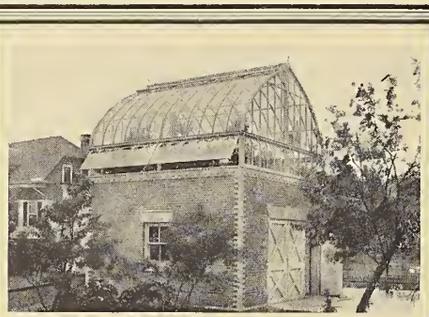
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dener's soul in California is the long dry summer. In this rainless half year, water must be gotten into the ground artificially, if at all; and the list of plants given above is the result of several years' experimenting to maintain an enjoyable garden on a basis that will carry it through the dry season without irrigation becoming a burden. This list is intended for what may be called the more conventional garden.

There is, however, another type of garden possible in California which can be kept up with even less labor, and at the same time is always beautiful. This we may call the native California garden. The luxuriance of flowers which we now habitually associate with Southern California is comparatively a recent development—a case of man's making the desert to blossom as the rose; and if water were withheld for one season the land would revert to its original semi-aridity.

The native flora of this semi-desert, however, is very interesting, and of recent years there has been an increasing disposition to introduce suitable representatives of it into gardens here. In large grounds there is usually, now at least, a corner given up to Cacti, Yuccas, Cotyledons, etc., or a bit of wild tangle where seeds scattered before the winter rains begin yield in late winter and early spring a crop of the lovely wild bloom that never fails to charm the Eastern visitor—such as California poppy, Baby-blue-eyes, Indian paint brush, shooting-star, peustemons, gilias, phacelias and cream-cups.

For permanent effect, however, in this type of garden, particularly for the summer and autumn when most herbaceous natives have died down, reliance must be had on shrubs of good foliage, of which there are many. Of these may be mentioned two or three species of California sumacs—stately plants, hardly recognizable as sumacs by Eastern eyes; two species of buckthorn with glossy leaves and pretty berries; California holly or toyon (botanically *heteromeles*), whose scarlet berries are California Christmas berries; and various species of ceanothus or wild lilac. Selections from these native plants, with a judicious intermingling of such exotics from Australia, South Africa and South America as thrive naturally under the conditions of the California climate—plants like the various species of pittosporum and coprosma—will ensure in Southern California a garden small or great which is both intrinsically beautiful, harmonious with the land, and of fascinating interest to the discriminating plant lover. In such a garden the use of rock work and boulders, with lippia and inesembryanthemum as a ground cover, gives completeness better than in the more conventional garden.

The Little Red House—Ardsley

SEVERAL summers ago we happened to pass a quaint little red house set close to a Westchester road. Its old-fashioned simplicity and the abundance of flowers

(*Continued on Page* 124)



A Hardy Flower Garden—What It Means to Me and May Mean to You

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TO YOU:
It may mean Home, Rest, Recreation—a retreat where you forget the cares of the business world; a place of old associations and tender memories.

Perhaps an old-time Garden whose treasures planted by other hands still live, uniting the living Present with the dead Past.

Perhaps but a tiny spot of brightness surrounded by a desert of brick and mortar, later to give place to the House and Garden which together make the complete home of beauty and joy.



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(*Continued from page* 122)

and shrubs made a striking impression. So great was its appeal that the following spring found us in possession. The little house is only a story and a half high, but modern improvements and a little remodeling made it a comfortable summer home.



Comfort and convenience added to an old landmark without spoiling its charm

The main room downstairs we used as the living-room, and adapted another immediately adjoining in the rear as a bedchamber. A third little room we converted into a bath. Upstairs we found space to provide quarters for our guests and for the maid. With the addition of electric lights and running water our interior scheme was made complete.

Outside we built a garage of the same color and style as the house, and spent the



A quaint little red house, set close to the road, and surrounded by fine old trees

rest of our labor in improving the porch. A piece of opaque glass let into the roof gave us more light in the living-room.

Now, as our alterations are completed, we receive considerable satisfaction in the thought that we possess a house thoroughly consistent with present-day ideas. The porch in the rear, with its quaint benches; the small window panes, and even the Dutch door, represent types of former architecture which the modern period has stamped with its approval and adopted for its use. Best of all, however, we have added comfort and convenience to an old landmark without destroying its appearance.

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A Good Utility Plant

AMONG the 300 species of Ipomea there are many varieties both beautiful and well adapted for special requirements. Owing to these numerous forms, however, there is some difficulty in getting

(*Continued on page* 126)

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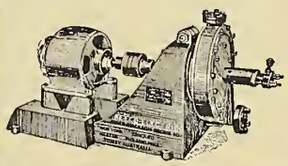
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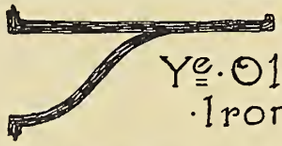
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Hardy Perennials our specialty. We grow thirty acres. *Get our net wholesale prices with all necessary cultural directions and largest list of Novelties, for the asking.*

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(*Continued from page* 124)

just what one wants. If care is taken in description and an intelligent and trustworthy dealer resorted to, one may select flowers of great assistance in rounding out the garden scheme.

One in particular is very desirable. This is the California variety of *Rubro Caerulea,* called Heavenly Blue, which is especially useful and most beautiful. It was once thought to be a cross between *I. Leari* and *I. versicolor,* but is now considered a form of *I. rubro-caerulea,* but not to be confused with the ordinary "rubro." Its color is a vivid sky blue, except at the heart, which is a delicate shade of cream. Each flower grows on a long, graceful stem, while the "rubro" has flowers in clusters, 4-6 blossoms—in purplish blue, sometimes spotted and streaked with reddish shades.

The most common manner of planting the Heavenly Blue is for a climbing vine. So rapid is the growth that it takes but a short time before there is a thick screen of smooth, silky, transparent leaves forming a perfect background for the brilliant blossoms. When so employed it is best to plant the seeds about two feet apart.

In growing, plant the seeds inside early in the season, after first soaking in warm water to give them a start. When they have become large enough, transplant and allow to become well root-bound. Plant out in settled spring weather. If it is desired to shade a porch or screen a building, plant in rich soil and water freely—but if a thick and clustered mass of blue is wanted, plant in the hardest and least cared for spot of the garden and water occasionally. Under these last conditions the vine often blooms when only a foot high. One need not wait for spring; seeds, four in a pot, may be planted in the fall or early winter. The dwarfed plants will produce flowers measuring four inches in diameter and, as house plants, stay in bloom for several weeks. It is an excellent plant for the greenhouse and is especially valuable for cut flowers.

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The second in importance is the occupation the head of the family pursues to produce the aforementioned income, and the distance he has to travel to and from his residence and his place of business or his office.

Any American family can live comfortably, but not ostentatiously, in any of the suburbs to our larger cities, or in many of the cities of ten thousand inhabitants, on an income of twenty-five hundred dollars.

(*Continued on page* 128)

The New Berry Giant Himalaya

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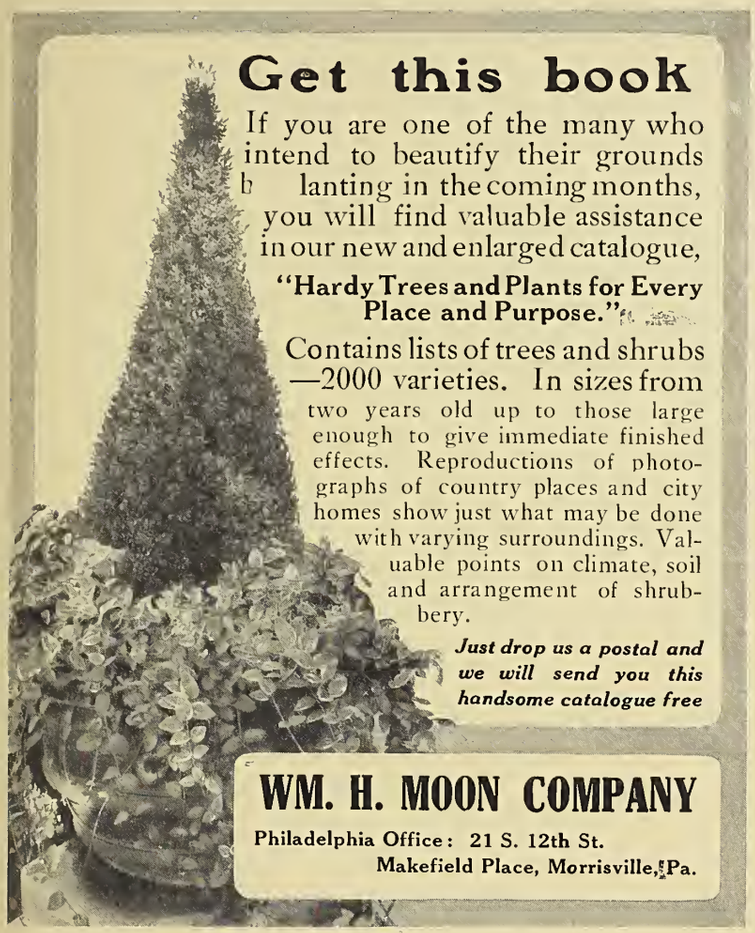
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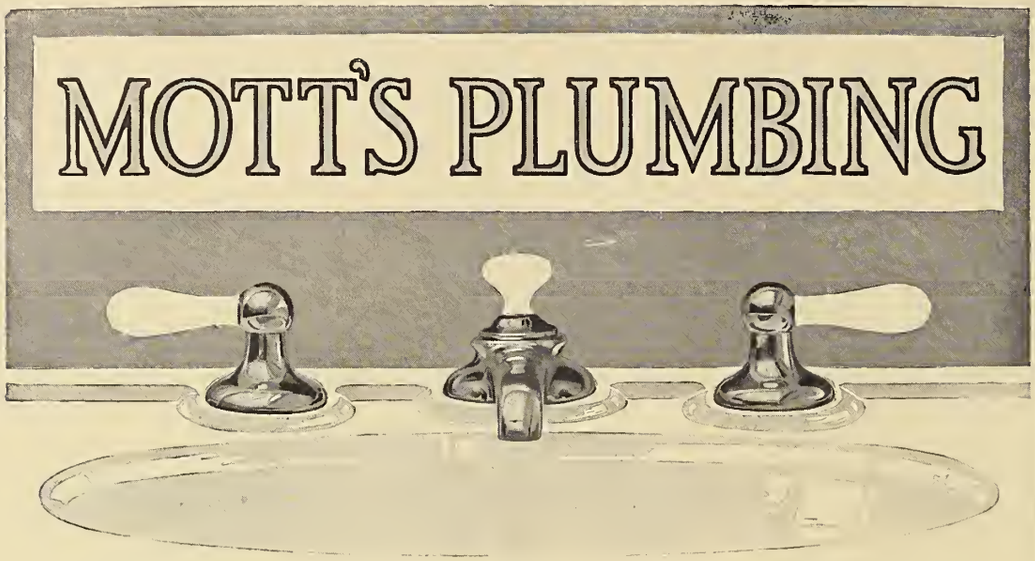
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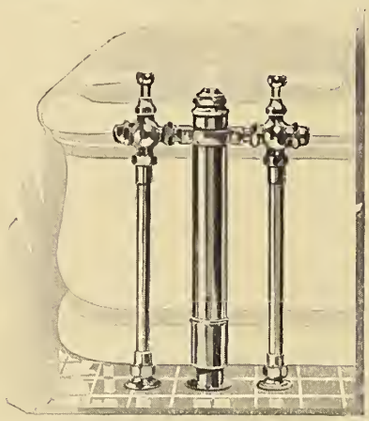
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Inexpensive—Easily Adjusted
Fit any window.
Add greatly to the Quiet and Comfort of your home.
Stop All Noise. Shut Out Dust and Draft.

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NICKEL FINISH
10 for 25 cts.

A small, three-bladed metal wedge of varying thicknesses that may be used as wanted or attached permanently to the sash. Holds windows or screens firmly. Stops all rattling. Effective for use in carriages, motor cars, motor boats, etc. Guarantee "Satisfaction or money back." Send for trial order TO-DAY giving your dealer's name. Write for circular of motor car and household specialties.



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Interior decorations of all descriptions planned and executed. Single rooms or whole houses furnished, Wall coverings, hangings, rugs and furniture selected to suit any scheme.

Out of town orders carefully attended to.

Lamp and candle shades. Artistic lighting of houses Stenciling.

Summer Address, Southampton, L. I.

(*Continued from page* 126)

Thousands do on considerably less. Many of them do it in the most expensive and least enjoyable manner by cooping themselves up in the packing cases called the modern flat, when within a few minutes' ride are to be found pleasant, roomy dwellings surrounded by comparatively large lots, the combination furnishing unlimited opportunities to get out in the light and health-giving sunshine God has so freely supplied.

In many instances the suburban home will rent for enough less to pay car fare. Then, too, if your surplus bank account amounts to one thousand dollars, the home can be purchased by getting the balance of the purchase price from one of the many excellent building and loan companies. The building and loan payments, in that event, would take the place of rent, and instead of losing from fifteen to forty dollars each month, that amount would be invested in a home, which, if a judicious selection has been made, will increase in value so that by the time the last payment has been made the property will be worth more than the sum actually invested.

With the above introduction, I will endeavor to describe our method of arranging our expenses. We are so fortunate as to have our home, so that the item of rent is eliminated from the list of our expenditures. We allow about as follows for each year:

1.	Fuel	$ 100
2.	Meat (15c per day)	55
3.	Groceries (50c per day)	182
4.	Clothes	300
5.	Taxes and insurance	50
6.	Repairs	50
7.	One domestic ($4.00 per week)	208
8.	Seeds, plants, labor, depreciation in value of tools, etc	30
9.	Ice	25
10.	Life Insurance	100
11.	Medical and Dental attendance	100
12.	Books and periodicals	50
13.	Amusements, recreation, etc	200
14.	Lights	50
	Total	$1500

Articles two and three are reduced to those amounts by the judicious management of the back yard as hereinafter described. Articles seven to thirteen are variable, but the above represents a liberal average. Article one would increase or diminish in a colder or a warmer climate, while fourteen will depend entirely upon your local utilities corporations.

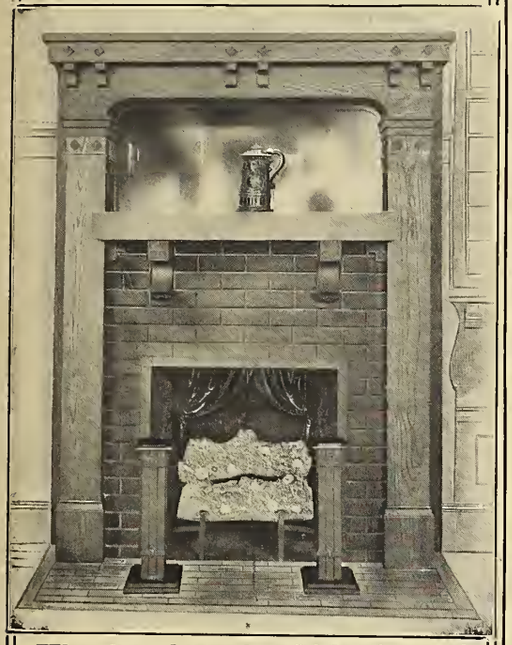
My main idea in writing this article is not so much to tell you how cheaply we live as it is to tell you how much pleasure and profit we derive from the usually neglected portion of the city or suburban lot, the backyard, and to show you how, by the utilization of the same, our food bills are decreased, our home decorated, our general health promoted, and even our income augmented.

Our lot is rather larger than usual, being 100 x 195 feet. We have arranged it by allowing a little more than half for the house and lawn, a space forty feet square

(*Continued on page* 130)

A Cheerful Fire

As You Enter the Hall Bids the Heartiest Welcome to the Home



The fireplace should be framed with a

Wood Mantel

the most appropriate chimney piece for the dwelling house, harmonizing better than any other material with the usual wood finish and decorations. Here's an attractive mantel. There are many others, as well as helpful hints for home builders and home owners, too, in our illustrated booklet,

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That we'd be glad to send you, if you address

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Guaranteed to develop 4 h. p. Made in 1, 2 and 3 Cylinders, 3 to 36 h. p.

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3 H. P. Pumping and Stationary Motor $65.00. Write for Marine or Farm Engine Catalogue.

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THREAD and THRUM RUGS are now made seamless in any width up to **16 FEET** and any length, in any color or color combination. 65 regular shades--any other shading made to match. Send for color card.

Arnold, Constable & Co., Selling Agents, New York
Thread & Thrum Work Shop, Auburn, N. Y.



Wouldn't you rather look at a group of Pines, Spruce and White Birches like this than a disagreeable building and its activities?

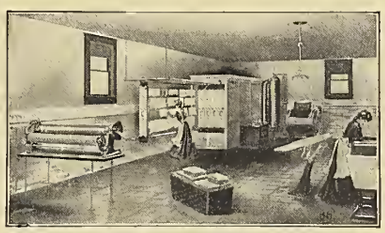
Wouldn't some such screen add to the quietness and beauty of your grounds by shielding them from the view of adjacent property or the peering public?

We can duplicate this very screen shown, and do it right now. Every one of the trees will be fine, big, sturdy specimens that we will guarantee to thrive. There are logical reasons why such trees are best planted now rather than in the spring.

Send for our catalog and find out about the very unusual assortment of trees we have, both large and small (but mostly large). It also shows and explains to you our tree-moving methods and why Hicks' way is such a success.

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A Modern Residence Laundry Room showing installation of "CHICAGO-FRANCIS" Dryer & Laundry Stove

When using the **"CHICAGO-FRANCIS" Combined Clothes Dryer and Laundry Stove.** Clothes are dried without extra expense, as the waste heat from the laundry stove dries the clothes. Can furnish stove suitable for burning wood, coal or gas. Dries the clothes as perfectly as sunshine. Especially adapted for use in Residences, Apartment Buildings and Institutions. All Dryers are built to order in various sizes and can be made to fit almost any laundry room. Write today for descriptive circular and our handsomely illustrated No. D. 12 catalog. Address nearest office.

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VINES are the frills of Dame Nature's dress—the beautifiers of her barest and unsightliest spots. We offer, DELIVERY INCLUDED IN PRICE, extra strong vines:

	Each		Each.
Ampelopsis Veitchi—Boston Ivy	.20	Mammoth Beauty Passion Vine	.15
Aristolochia Sipho—Dutchman's Pipe	.65	Apios Tuberosa, Wisteria-flowered	.15
Clematis Paniculata—Starry Eye	.25	Ipomoea Pondurata Moonflower	.30
" Coccinea—Coral Bell	.15	Honeysuckle, Golden Rain	.20
" Purple Jackmanni	.50	Kudzu Vine—Jack and the Bean Stalk	.50
		Fastest growing vine in existence	

This collection of ten HARDY, beautiful, rapidly growing vines for $2.50, DELIVERY PAID.

GREATEST VINE NOVELTY (Hydrangea Scandens)

Climbing Japan Hydrangea. Hardy climber, beautiful, glossy, light green foliage. Vines covered in summer with clusters of Hydrangea flowers of creamy white, delicately fragrant. Very strong, pot grown, $1.00, delivery paid.

Together with the ten vines listed above, $3.00.

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For immediate delivery: Cobea Scandens, Clematis Paniculata, Opomea Bona Wax, Lobb's Tropaeoluin, Orchard Sweet Peas, Kudzu Vine, Wild Cucumber Vine, Butterfly Bean, Japan Morning Glory, Ornamental Gourds, each Pk., 10 cents. The 10 for 60 cents. Senr for our Spring 1911 interesting Catalogue. Address,

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CYPRESS WILL NOT ROT

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CYPRESS LASTS PRACTICALLY FOREVER

THE WOOD THAT *LASTS*
SHALL BE *FIRST*—with *wise*

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Some people have no bungalow, but everybody has a Bungalow hope. The WOOD you use determines your *Investment* value. Use CYPRESS, of course. The plans you build from decide its *Artistic* value. Vol. 18 of the CYPRESS Pocket Library (FREE to you) contains Complete Specifications and Working Plans (worth $10 to $25 and *sufficient to build from*) for a beautiful CYPRESS Bungalow costing about $3000. Write *Today*.



(Plan by Henry L. Wilson, Architect, Chicago)

Why not FIND OUT what CYPRESS can do for YOU, NOW?

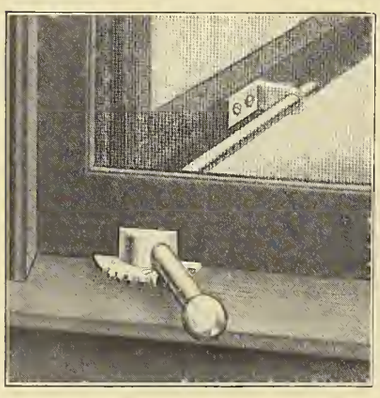
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WRITE US—ASK YOUR OWN QUESTIONS—about big needs, or little ones. You can rely on detailed and reliable counsel if you address our "ALL-ROUND HELPS DEPT."

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INEXPENSIVE TO BUY AND INSTALL IN HOUSES OLD OR NEW
GET OUR BOOKLET TODAY

CASEMENT HARDWARE CO.
154 WASHINGTON ST. CHICAGO

(*Continued from page* 128)

for the barn, 30 x 60 for chicken house and lot, and the balance for vegetables and flowers.

On the lawn and in the chicken lot we have planted fruit trees, instead of purely ornamental ones for shade. These give us more fruit than we can use, besides being just as ornamental at any time as maple, elm or oak, and decidedly more so when they are loaded with their fragrant blossoms.

In the chicken lot we raise enough chickens each year to supply our family of four with all the *fresh* eggs and poultry we can eat. The surplus pays for their keep each year, so that what we use is pure gain. Neither do we deny ourselves of either chickens or eggs when we want them. Aside from the financial gain is the fact that fresh eggs and poultry are more nutritious and decidedly more palatable than the cold-storage variety. If one cared to go in for fancy poultry, the above could be supplemented by the sale of eggs at high prices for settings, and of specimen birds. The dropping-boards furnish nearly all the fertilizer used on the garden plot.

No one knows the difference between vegetables gathered from your own garden while the dew is still upon them and those gotten from the market except he who has tried both. Our garden plot furnishes us all the vegetables we use during the entire year except the very early fresh vegetables. The scope of this article does not permit me to go into the methods of intensive culture practiced, and I can only say to beginners that the only way to begin is to subscribe to the *good* periodicals on this subject and to experiment. Let me say in passing that these experiments are very fascinating. Of course, one has failures once in a while, but they only spur on to greater endeavors.

Part of this plot is given over to a strawberry bed, other small fruits being planted around the edges of the lot. From these we can all of the fruit of that kind we can possibly use and have a considerable quantity left to sell or to give to our friends. The surplus beans, peas, beets, etc., are canned for winter use, and are far superior to those purchased at the stores. The æsthetic is not neglected, for flowering plants are placed wherever there is room for them, even in some instances between the rows of vegetables.

We have a small hot-bed and a cold-frame. In these, at a trifling cost, we raise enough flower and vegetable plants of a superior quality to supply all our own needs. Many of our neighbors are more than willing to take our surplus plants at a higher price than that asked by the regular dealer, because they know we buy only the very best seeds and they can take the plants direct from the propagating bed to their own garden, thereby minimizing the shock of transplanting. We also raise a large portion of our own seeds, a special corner of the garden being devoted to that

(*Continued on page* 132)



ROSES Guaranteed to Bloom

"The Best Roses in America." This is not an idle boast. Our vice-president is the foremost rose propagator of this United States. Ever since the Civil War, when this business was first established, he has been developing rose culture and producing the newest and best. His genius, combined with the rich soil of this unequalled rose country and our mammoth modern greenhouses, has made

Conard & Jones Roses

excel in form, vitality and loveliness. We absolutely guarantee every one to bloom.

We cannot tell you here all about their wondrous beauty and endless variety, nor about our many other flowers, but we will with pleasure send you our handsome illustrated

Free Floral Guide

from which you may easily select at your leisure. By all means drop us a postal for it to-day!

We also issue that famous little book, "How to Grow Roses" (1911 edition, revised), on selecting, planting, pruning and cultivating. Enclose 10c when you write for the catalogue, and we will mail the two books.



Here is our popular "Five Point Set"—Wm. R. Smith, pink; Mme. Eugene Mariitt, rich red; Maman Cochet, white; Birdie Blye, light carmine; Lady Roberts, yellow. All for $1—1 year size; $2.50—2-year size; delivered.

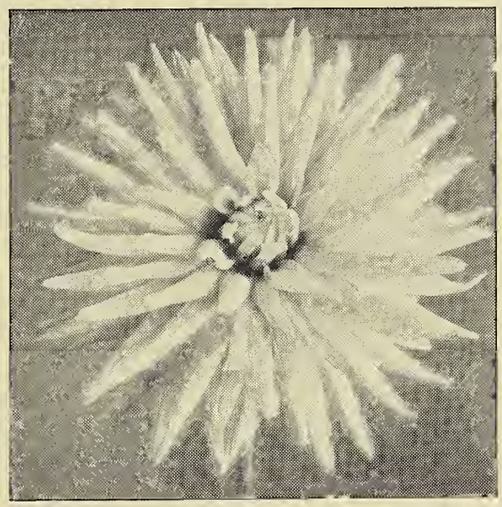
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Rose Specialists—50 Years' Experience

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Fottler-Fiske-Rawson Co. Boston



Garden Manual for 1911 of the Highest Grade Seeds now ready for delivery.

If you have not received it this season write a postal now and mail it to us.

We'll see that you have the Garden Manual promptly.

This Garden Manual has been rewritten and new illustrations of Vegetables, Flowers and Plants used to make it stand in the front as a place to find
The Newest in Vegetables.
The Newest in Flowers.
The Best in Spring Flowering Bulbs.
We had over five hundred *new varieties* of *Dahlias* at our Dahlia Farm last season. Many of these are in our Garden Manual.
As a reference during the year our Garden Manual is extremely valuable.
Just write now, and we will mail it Free.

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Special Flower Seed Offer

The merits of our Flower Seeds are known to a great many readers of HOUSE AND GARDEN, and if you are not one of them, we are especially anxious that you should be.

Our Special Offer For 25 Cents

We will send you postpaid—A COLLECTION SIX GRAND ORCHID-FLOWERING SWEET PEAS—six packets containing about 100 seeds each, sufficient to plant a row 6 feet, or 36 feet in all.

Countess Spencer *Asta Ohn Spencer—Lavender Mauve* *Aurora Spencer—Variegated*
Countess Spencer—Soft Pink *Captain of the Blues Spencer*
King Edward Spencer—Deep Scarlet *New White Spencer*

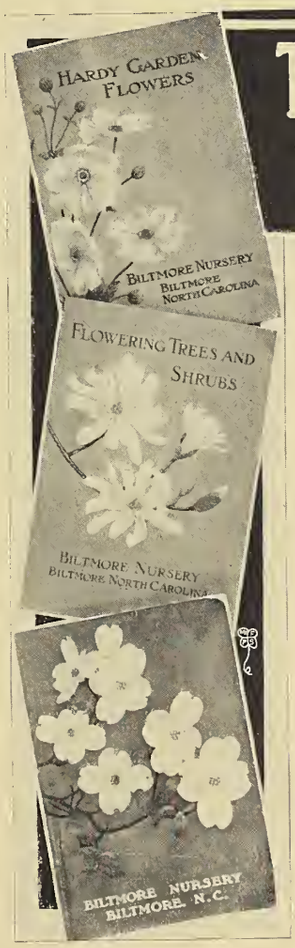
The varieties listed above have proven to be among the best SIX DISTINCT SORTS and are listed in our catalog at 10 cts. per packet or a net value of 60 cts.

In order to make our inducement more inviting and demonstrate the merits of our Seeds, we will include 1 Packet of this Distinctive Sterling Novelty—NEW AFRICAN ORANGE DAISY (Dimorphotheca aurantiaca). A beautiful dwarf growing Summer Flowering Annual; flowers of glossy golden orange color with dark colored discs—very striking—value 15 cents.

We feel confident that this collection of Six Packets of Grand Orchid Flowering Sweet Peas, together with Packet of New African Orange Daisy, which complete is valued at 75 cents, is the best and most attractive offer we have ever made. ORDER NOW. Send for our CATALOG, which is a complete, well illustrated guide to the Garden Maker.

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You want the *best* plants, trees and shrubs for *your* gardens and grounds—the best *kinds* and the best *specimens*. The climate and soil of western North Carolina are such that on the various elevations may be grown almost every hardy plant or tree. At Biltmore Nursery those advantages are so utilized by skill and care as to produce a *strain* of plants of extraordinary vigor. To aid planters in making selections, Biltmore Nursery has published three books—*one* sent free to any home-owner.

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Many of the best of the trees and shrubs producing showy blossoms are shown, from photographs, as grown in typical gardens, lawns and yards. The pictures and the text give numerous useful ideas for planting home grounds, large and small, to advantage.

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If you have a garden of perennials, or want one, request "Hardy Garden Flowers." Should you prefer the more showy things, tell us to send "Flowering Trees and Shrubs." In case you have a larger place and can plant extensively of many varieties, we shall be glad to send the Biltmore Nursery Catalog.

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No. 25 Planet Jr. Combined Hill and Drill Seeder, Double-Wheel Hoe, Cultivator and Plow opens the furrow, sows seed in drills or hills, covers, rolls, marks out next row. Also has perfect cultivating attachments.

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Write today for 1911 illustrated catalogue of all Planet Jr. implements. **Free and postpaid.**

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Time to Think

how you are going to beautify your lawn. Time to decide and *get your order in for*

KALAKA

The Wizard Lawn Producer

Soil and moisture all that's needed

A mixture of selected grass seed and animal manure, dried, purified and in highly concentrated form. All foreign matter absolutely eliminated; mixing is done by machinery; the proportions exact and based on the experience of expert horticulturists. Affords the positive means by which any one, *anywhere*, can have green grass and a rugged turf. Cheaper, goes further than other seeds.



5 lb. box shipped express prepaid East of Missouri River on receipt of $1.00. Order at once. Let us send instructive booklet, "How to Grow a Lawn." It's FREE.

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This service is founded on 57 years' Meehan-experience.

Ask us to help you—tell us what you want, give particulars and back will come dependable advice—without any cost. *Write today.*

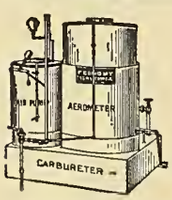
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may enjoy city comforts and conveniences at less cost than kerosene, electricity or acetylene, with **None** of their dangers, by using

Economy Gas Machine

Produces gas for light and kitchen fuel. May be lighted the same as electric light, without batteries or wires. Call or write for list of satisfied customers.

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Bears the first season! The most productive raspberry—planted in April, bears continuously from June to October of same year. The first to ripen and the last. Berries large, of bright red color and excellent quality — ship 200 miles in first-class order. Absolutely hardy & sun-proof.

Our new catalog Free—tells how to choose and grow small fruits "that produce profits."

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SPECIAL SWEET PEA OFFER

We will mail upon receipt of 25 cents, one packet each of the following:

GRAND SPENCER TYPE SWEET PEAS

White Spencer, white; George Herbert Spencer, rosy scarlet; Primrose Spencer, primrose; Apple Blossom Spencer, pink and white; Countess Spencer, grand pink; Frank Dalby Spencer, lavender.

We will also mail our **NEW 1911 CATALOGUE** containing a grand list of the best varieties of both Flower and Vegetable Seeds, Plants and Bulbs, to those interested in beautifying the grounds around the house, or in the making of a garden.

BRIDGEMAN'S SEED WAREHOUSE
RICKARDS BROS., Props.
High Grade SEEDS, BULBS, PLANTS, Etc.
37 EAST 19th ST., near Broadway **Established 1824** **NEW YORK**

(*Continued from page* 130)

purpose. This is an especial advantage in the case of parsnips, on account of their low vitality, and in the case of cucumbers, as they are at their best at five or six years of age.

This may all seem like a lot of work, but if you are one of those "who in the love of nature, holds communion with her visible forms;" if you have a wheel hoe, if you feed your chickens by the dry feed and hopper system, and if you are not afraid of soiling your hands, you can do it all, as I do, in an hour or an hour and a half before and after office hours, sleep more soundly, enjoy your home and your meals as you never did before, and still have all the time you need for society.

I have not gone into the details of the management of the house because the woman does not live who, having the least bit of executive ability, cannot take a certain sum and a garden and manage the home on that sum, be it large or small.

The way to arrive at the sums to be allotted to the different articles is to determine your fixed charges (rent, insurance, fuel, etc.), decide how much you want to save each year, set aside a small amount for unforeseen contingencies, then divide the balance among what may be termed the elastic articles (food, amusements, clothes, etc.) as experience will suggest, and *stick to it.*

In conclusion, I only want to say that if you are a novice, go slowly. This advice needs especial emphasis with regard to poultry, for while a general outline of the methods of procedure can be obtained from various poultry journals, the man never lived who did not have to learn to manage a large flock by observing a small one closely. On the other hand, many men and women derive a good income from poultry alone.

With this outline of a subject, any section of which contains enough material for a large volume, I conclude, commending to you, for your health and well being, the simple suburban life.

ROYDEN E. TULL

Foliage Plants for Decoration

THERE are many cut flowers used in positions where additional foliage, other than their own, is an improvment to the decoration.

Maiden-hair ferns, for instance, are effective, for the fronds running almost at right angles to the stem, form a delicate lacework of green at the base. They are often hard to obtain, however, and do not always take kindly to cultivation.

One of the common meadow rues (*Thalictrum dioicum*) makes a splendid substitute. It lasts well when cut, and is as easily grown as a weed. It may be planted in shady corners of the vegetable garden, or in open spaces among shrubs. It is native here, growing luxuriously on dry ravine banks, which are heavily wooded but clear of dense undergrowth.

(*Continued on page* 134)

A Word of Advice to the Home Maker from an Expert House Decorator



Under this heading is appearing a series of letters containing advice on the interior finish, decoration and furnishing of the Modern Home. These will be found full of helpful and PRACTICAL suggestions.

Any questions pertaining to the above addressed to Margaret Greenleaf, Consulting Decorator for Murphy Varnish Company, will receive prompt attention.

LETTER No. 4

Where the design of the house is along Elizabethan or Jacobean Lines the stain and finish used upon the woodwork must be rich in tone providing the color time would produce upon the wood. This will insure a harmonious effect. The finish should be natural also, that is, without a high gloss.

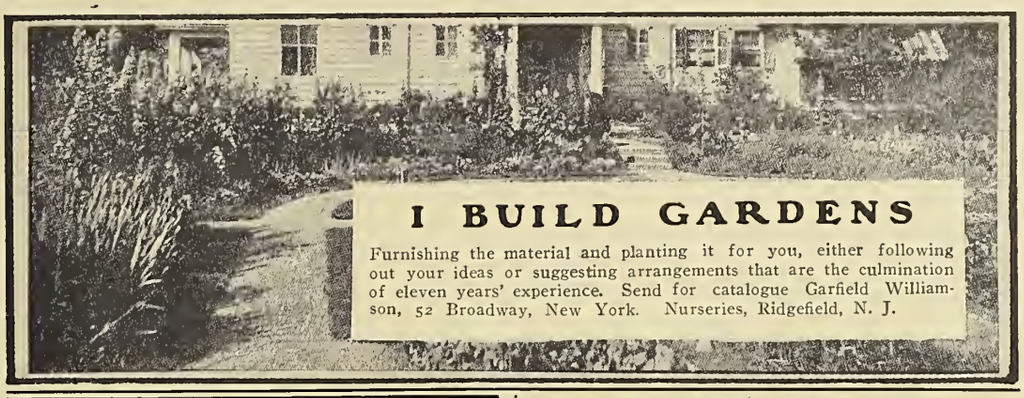
The natural Penetrating Oil Stains made by Murphy Varnish Company will supply the shades on inexpensive as well as on the more costly woods. The colors are all true and lasting, and when finished by two coats of Nogloss Varnish the result is excellent. These stains are easy to apply and durable and will make the commonest wood appear artistic and handsome. For birch a beautiful selection of tones are made—silver gray, light and dark brown, olive green and two shades of mahogany. For oak, ash and chestnut —gray, brown and green are especially pleasing. For yellow pine—brown, gray and mahogany or green are attractive, and on white pine, poplar, gum, and so forth, beautiful tones are secured.

Write for sample panels showing these finishes, and if you decide (as you will on seeing them) to become a patron of the Company, you are entitled to the full service of the Department of Decoration, which includes suggestions and samples of wall coverings and drapery materials, cuts of fixtures, furniture and rugs. The scheme sent you will be made up for your house and is not a stock scheme.

Address Department of Decoration

Murphy Varnish Company

345 Fifth Avenue, New York



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Furnishing the material and planting it for you, either following out your ideas or suggesting arrangements that are the culmination of eleven years' experience. Send for catalogue Garfield Williamson, 52 Broadway, New York. Nurseries, Ridgefield, N. J.

Are You Building?

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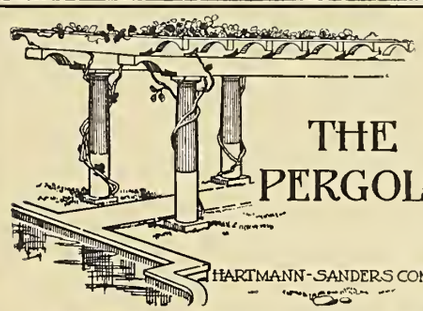
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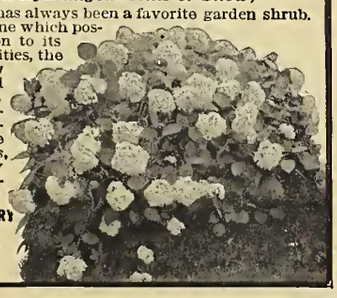
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Green's Nursery Co., Box 10, Rochester, N. Y.

(Continued from page 132)

Another suggestion for plants especially fitted to supply foliage for winter decoration, either in the greenhouse or the window-box is the use of common root vegetables. Prosaic as this may sound, turnips, carrots, parsnips and beets produce as beautiful foliage as many of the plants particularly intended for that purpose and they are raised with practically no care. Simply cut off the green leaves from the roots, pot singly in some generous receptacle, and water. They should then be kept in the dark for about a week and then treated as any of the bulbs—placed in a warm, sunny room and well watered. In a short time green shoots will appear, and the resulting plant will be found just as satisfactory as any purchased variety. The beets, with their full-colored and variously-formed leaves, are decidedly attractive, while the delicate frondage of the carrot surely rivals the ferns mentioned above.



Book Reviews

[The Publishers of House and Garden will be glad to furnish any books desired by subscribers on receipt of publisher's price. Inquiries accompanied by stamp for reply will be answered immediately.]

The Boston Museum of Fine Arts. By Julia De Wolf Addison. Illustrated. Cloth 8vo, 454 pp. Boston: L. C. Page & Company. $2.75.

The fact that museums and art galleries are more frequently visited by foreign than local inhabitants is acknowledged. A great many tourists who are enthusiastic about the Louvre or Dresden galleries or British Museum have never seen the inside of the buildings of similar character in their own cities of Boston or New York. This volume is an interesting and instructive guide to the pleasures of the Boston Museum, appealing to just this class, showing some of the fine works of art which may be seen without an oversea pilgrimage. To those who frequent this collection the book contains much which adds familiarity with its beauties. On the American painters it gives an intimate history of the artist, the subject and the occasion, making it doubly interesting. The book is full of illuminating criticism and valuable data concerning all departments of the Museum, besides giving an incentive to a visit which will be highly educational.

The Body and Its Defenses. By Frances Gulick Jewett. Illustrated. Cloth, 16mo., 342 pp. Boston and New York: Ginn & Company. 65 cents.

This excellent book is one of the Gulick Hygiene Series edited by Luther Halsey Gulick. It lays emphasis on the body's functions rather than on the physiological functions alone, and is a clear, rational treatment of these subjects.

(Continued on page 136)

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Main Building, Slater Industrial School, Winston-Salem, N. C., which is helping to solve the race problem.

WILL YOU GIVE $5 TO HELP SOLVE THE RACE PROBLEM ?



A Class in Cooking at the Slater School. The girls are trained in all branches of household science and the boys in dairying, carpentry, blacksmithing and like occupations.

IT IS becoming more widely understood each day that the only solution of the race problem is the education and Christianizing of the colored people. This is not a local matter for the South; it is a National question. Several schools have done magnificent work along these lines, notably Hampton, Tuskegee and the Slater Industrial and State Normal School at Winston-Salem, N. C.

A citizen of Winston-Salem recently gave the trustees of this latter school $5,000, provided they would raise an equal amount for a hospital where colored girls could be educated as trained nurses—one of the many branches of the School's work. The necessary additional amount was raised and with $10,000 the school has built a hospital worth almost double this amount by reason of the assistance of students and friends of the school in the manual labor.

State officials, seeing the excellent work that was being done, have offered the school $12,000, provided the trustees again raise an equal amount. Although they have used every effort and have striven in every way to meet the offer of the State, it seems impossible for the immediate neighbors of the School to raise this sum. With $24,000 cash it would be possible to increase the plant to a value of at least $48,000, as the colored people will do the manual labor free.

EVERY DOLLAR GIVEN NOW MEANS $4 TO THE SCHOOL

The School's present enrollment is 430, under the direction of ten teachers, all well trained colored men and women. There are four departments: The Practice School, for the work of the Normal School students; the State Normal Department, training teachers for the rural schools of the State; the Academic Department, for post-graduate work; and the Industrial Department. In the latter the boys are trained in dairying, carpentry, blacksmithing, gardening, shoemaking, painting and other like occupations. The girls are trained in sewing, cooking, laundry work, household science and other useful lines.

Here is a small part of a report made by the Examiners of the State Institutions regarding the Slater School:

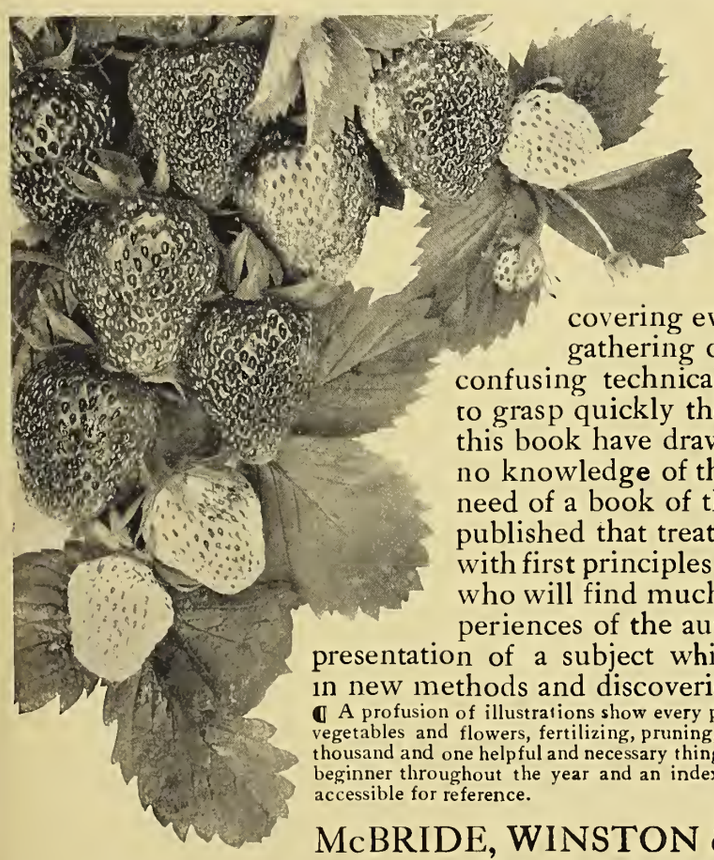
"The service which they [the trustees] have rendered in providing an answer to the most aggravating question of our day—negro education—and in meeting the objections of those who oppose the expenditure of money collected from the whites for the education of the colored, is beyond estimate.

"Their efforts have been to study the conditions which would surround their students after graduation; knowing that they must return to humble homes, they have educated them in the use of such implements as they would find there. No money was spent in the purchase of costly apparatus, none in high salaries to teach negroes 'science,' falsely so-called; but that real science of how to make honest citizens they have taught most successfully and at a very moderate expense."

W. P. WOOD, J .P. JETER, T. W. PATTON, Examiners.

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The Garden Primer

By GRACE TABOR *and* GARDNER TEALL

Indispensable to Every Garden Maker

¶ The Garden Primer, as its title indicates, is a handbook of practical gardening information for the beginner, covering every branch of the subject from preparing the soil to the gathering of the fruit and flowers. In it is set forth, without any confusing technicalities, just the information that will enable the amateur to grasp quickly the essentials of garden-making. The authors in preparing this book have drawn from their long experience, and in writing it assume no knowledge of the subject on the part of the reader. There has been great need of a book of this kind, yet, so far as we know, no volume has ever been published that treats the subject in this charmingly simple way. While dealing with first principles this volume has an equal interest for the advanced gardener, who will find much of value in the experiences of the authors, and in a fresh presentation of a subject which always abounds in new methods and discoveries.

¶ A profusion of illustrations show every phase of gardening, growing vegetables and flowers, fertilizing, pruning, cultivating, spraying and a thousand and one helpful and necessary things. Planting tables direct the beginner throughout the year and an index makes the book instantly accessible for reference.

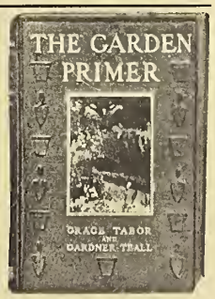
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¶ A good many people believe that Education comes only from schools and colleges.

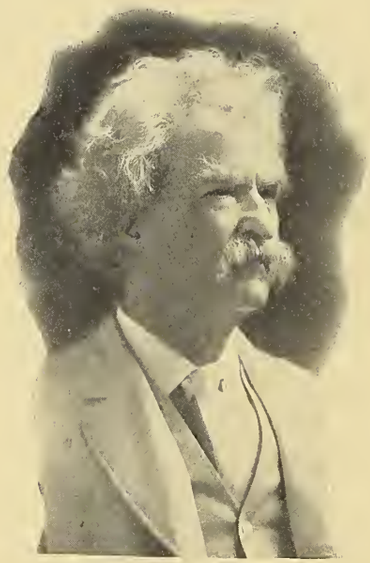
¶ It doesn't.

¶ The most effective, most worth-while Education comes from a knowledge of human nature and a knowledge of life.

¶ And the best way to learn these things that are real, is in the pages of Mark Twain's books. You have thought of him only as a humorist and philosopher.

¶ He is far more than this—he is first of all a Teacher, and you may benefit by his rich experience—use his powers of observation—learn human nature through his pages.

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(*Continued from page* 134)

Artistic Homes. By Mabel Tuke Priestman. Large 8vo., 148 pp. Chicago: A. C. McClurg & Company. $2 net.

Since the home is only one of many in a community, environment plays a strong part in determining its physical appearance. Mrs. Priestman's book is of value in showing what can be accomplished by making one's house fit harmoniously into its neighborhood surroundings. Her illustrations are all of houses now occupied and the majority of which have been built for less than $10,000, some costing as low as $3,000. With the keynote of design suggested, the book shows how the whole may be made harmonious by proper interior decoration, window spacing, wall and stair arrangement, etc. The delightful experiences are given of others who have gone to barns, stables and even to chicken farms for the material out of which to build their homes. The book is a practical help to prospective builders who find architects' plans and terms confusing.

Brick Architecture of the Middle Ages and the Renaissance in Italy. By H. Strack. Paper boards, portfolio, 15 x 20 ins., 46 plates in line and gelatine. New York: William Helburn. $8 net.

A well-chosen set of measured drawings that would, of course, be interesting mainly to architects. The reproductions, which are at a large scale, show elevations, sections, plans, and details, with photographs in some instances, of the most interesting brickwork of past ages.

Guide to the Mushrooms. By Emma L. Taylor Cole. Illustrated Cloth, 4 x 6 in. 206 pp. Garden City, L. I.: Doubleday, Page & Co. $1.50.

A convenient handbook that tells the essential differences between mushrooms that are edible and those that are poisonous. There are tables in the book showing when and where mushrooms grow, with a summary of species, outlining briefly and concisely the characteristics of each variety. There are many illustrations, some of them in color.

Practical Farming. A manual by John McLennan, Ph.M. Illustrated. Cloth, 16mo., 298 pp. New York: The Macmillan Company, $1.50 net.

The author of this volume announces that it has been his aim to place before the reader in a plain, practical way, useful knowledge and the results of scientific research as applied to the common things in agriculture without the use of technical terms or confusing tables, so that the tiller of the soil may have a friend and handbook to which he may turn with confidence and the conviction that he will find some valuable light on his agricultural problem.

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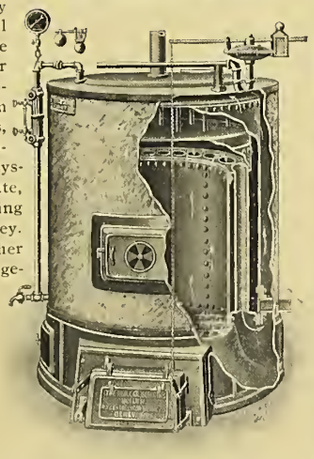
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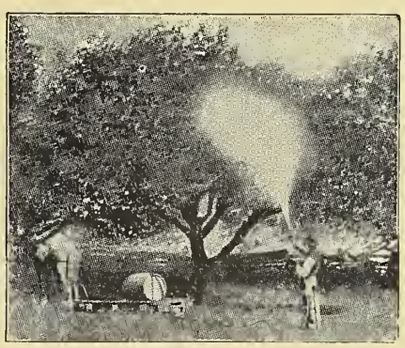


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THE HOUSEKEEPER

a monthly periodical heretofore published in Minneapolis. The Housekeeper has a circulation of four hundred thousand, and a yearly advertising revenue of two hundred thousand dollars.

Beginning with the March, 1911, issue it will be published from New York under the firm name of Collier & Nast, and will conform in every respect to the editorial and advertising policies of Collier's.

The present subscription price is 10 cents a number, or $1.00 a year. It is probable that within a few months this will be raised to $1.50 a year and 15 cents a copy.



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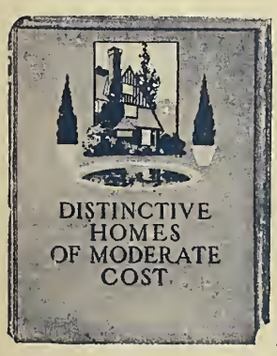
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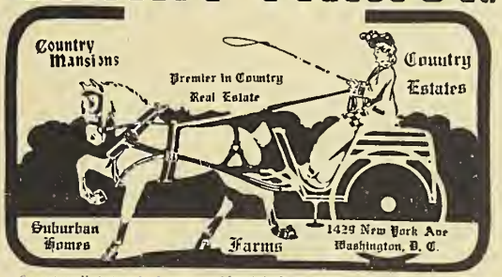
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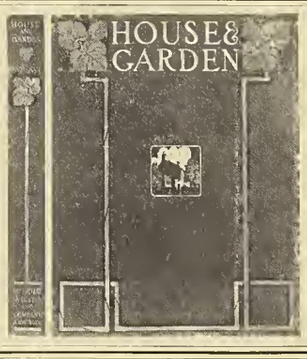
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Alfalfa for Poultry

THOSE living in a village or on a surburban place, who must confine hens in yards, have difficulty in providing suitable green food for them, and without a cheap source of green food, hens kept in confinement are less profitable than those which have the run of a grass range. If one can easily supply hens with green food, which has so large a protein content, that the grain ration can be considerably reduced, the net profit will be greater. Fowls are kept in better health, and have stronger vitality when supplied with green food all the year.

I have kept a large flock of hens on my village place for several years. I am now



While one crop of alfalfa is growing the hens can be turned out to eat another

satisfied that the best crop to grow for them, that provides a succulent food in summer, is alfalfa. A plot of alfalfa, well established, a rod or two square, will furnish a flock of 50 fowls with green food all summer. Good rich garden soil, that is drained, is just the place for the alfalfa bed. If one is doubtful about growing alfalfa, he can grow it in drills, if the conditions are made right.

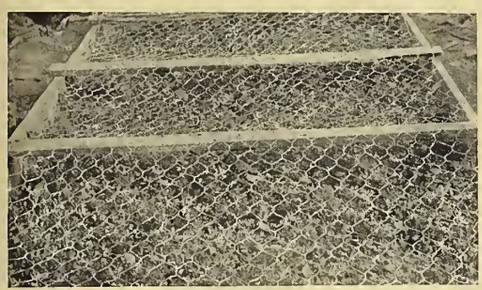
Early in the spring when the soil has dried out so it crumbles in the hand, plow or spade up the plot for alfalfa, and if it is not rich enough to grow a large crop of corn, work in and mix well with the soil, stable manure or high grade commercial fertilizers.

The clover family, of which alfalfa is a member, requires lime as a food, and more than most soils contain, so it is a safe thing to do to apply lime to the alfalfa bed before sowing the alfalfa. If one can buy ground lime, he can sow it over the bed as he would his fertilizer, but if stone lime is used it must be put in small piles and slacked by covering with soil, afterward spreading it with a shovel. One ton to the acre is about right, if one cares to figure it for a small plot, but there is not much danger of getting on too much. The lime should be applied early in the spring, either before or after the manure, as no harm will come, unless lime and manure are brought in close contact in the same pile. Wood ashes can be used in place of lime, as they are one-third lime, but a considerable quantity is needed.

Work the plot over every few days, so as to get it in good tilth, and destroy the first crop of weeds. The last of May or

the first of June, the plot is ready for sowing. The early sowing of alfalfa is not always necessary but it is safer where the summers are short, as the roots get down deeper before winter. In well prepared soil, alfalfa sown in June or July, generally winters well, and in latitudes south of New York, late sowing is quite safe. Sow at the rate of 30 pounds of seed per acre, if broadcasted, and with it a thin seeding of barley for nursecrop.

For those who wish to grow alfalfa in weedy soil, or wish to study the plant, and learn its requirements, I advise the sowing of it in drills. Make the bed just as you would for onions. Rake off the surface finely, and sow quite thickly in drills eighteen inches apart, and cover the seed one-quarter of an inch deep. Work the space



Alfalfa under netting, through which the hens may pick

between the rows with a wheel hoe, and keep the bed clean. With this plan, all vacancies are filled easily by sowing more seed and extra fertilizers can be applied between the rows as needed. It is well to place a mulch of coarse manure between the rows early in winter.

A small crop will be cut the first year, thereafter four crops a year for many years. The green alfalfa can be cut in short lengths with shears or a clover cutter and placed in slatted boxes, or if one has two or three plots, the hens can be turned out to eat one down while the others are growing, as shown above. When the fowls get accustomed to the alfalfa they will eat it as readily as grain.

One method I have worked out is to sow a bed of alfalfa in the hen yard, cover the bed with wire netting, and let the hens pick the alfalfa through the wire netting. The bed needs some care to keep the alfalfa clipped, and two beds are better, so one can grow while the other is being eaten off.

One fact I have demonstrated with both the cows and hens. After one has obtained the largest production possible with all other foods, the production can be much increased by supplementing them with alfalfa, and I have discovered that the cured alfalfa or alfalfa hay will take the place of alfalfa meal in winter for poultry. W. H. Jenkins

Suggestions for the Poultry House

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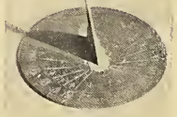
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been advised that plaster will draw moisture. The house is 16 x 40 x 8 with a peaked roof, small window in each end of attic; also two ventilators through the roof.

Would you plaster the entire house or only the walls, leaving the ceiling lathed and the upper part filled with straw during cold weather, or would you plaster the entire inside? We have six windows on south side, three on north side on an alleyway. I believe the new plaster is as hard as flint. I want a house that I can keep perfectly clean. Thanking you,

W. M. R.

Fresh-plastered walls will exude moisture until they have dried. After this condition has righted itself. I do not see why your walls should draw moisture any more than the walls of a dwelling.

I suppose you have space between the outside wall covering and the lath that you purpose to plaster, and this air space together with the proper inside ventilation obviates any tendency to sweating after the moisture used in the making has evapporated.

Beware of leaks. Careless outside workmanship would result in damage to your plastered wall, causing it to drop.

Aside from its appearance and the smooth surface, the plastered ceiling has no advantage over the loft packed with straw in winter and empty in summer. Indeed, in summer this empty loft would have a distinct advantage in cooling the room below, for possibly your roof ventilators will not prove adequate under all conditions. I found such to be the case in a hen-house about half the size of yours with one ventilator in the center of its peaked roof.

The difficulty with the overhead ventilator is that while it relieves the room of heated air, the cooler air near the floor does not become so heated and escape with its impurities. If, ultimately, you find this to be the case, you can insure fresh air by fitting muslin covered frames to at least two of your south windows, using them instead of glass.

The "Mad Dog" Superstition

ONE generally expects to find superstition a thing of the past in these enlightened days, but popular ideas in regard to dog diseases are still at the witchcraft stage. How many harmless dogs have been killed because some hysterical persons thought they were mad! Many believe that the bite or snap of even a healthy dog will bring on hydrophobia if the dog should get the rabies some time afterward, so insist on the death of the animal. Such ideas are as ridiculous as they are groundless. Comparatively recent scientific investigation has proved that the saliva is virulent from six to eight days before the animal develops symptoms of rabies, so that if the dog remains healthy for ten days after the bite no danger need be feared, even if he should get the disease during the next few weeks. With the modern Pasteur treatment and an intelli-

gent attitude toward the "mad dog" many of the dire results can be eliminated.

The case is much the same whenever a dog has fits. It is at once thought a case of rabies and very often the innocent animal killed. There is as much ground for prescribing the same treatment to epileptic patients, for these diseases are quite similar. Although fits are very familiar to most dog owners, they are none the less dangerous. In puppies they are called convulsions and result in a condition very like that seen in the infantile sickness of the same name. Rest and quiet will do more for the animal's recovery than anything else. Cover him with a blanket when the attack first seizes him and carry him as gently as possible to some darkened room or cellar where he can be made comfortable. The presence of direct sunlight is irritating and retards recovery. It is of prime importance to use as little force as possible—simply be at hand to see that he does not injure himself. As soon as the dog has calmed down and is relaxed enough to swallow, administer from 2 to 20 grains (according to maturity) of bromide of potassium in a little camphor water. Repeat three times a day for a few days and keep on a milk diet. Keep him away from all excitement or petting and the trouble will be of no serious account.

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ESTATE OF ISAAC N. SELIGMAN

Don't Risk Your Trees in the Hands of Ignorant or Irresponsible Persons

RESPONSIBILITY is of vastly greater importance than the matter of a few cents more or less per hour when it comes to the treatment of trees, as it is in any other profession that deals with living things.

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SKILL in the art of Tree Surgery is not acquired from books. Neither is it obtained in Agricultural Colleges nor Forestry Schools. These institutions fill an important place in the national life, **but they do not and can not teach correct Tree Surgery.**

THOROUGH TRAINING and skill are synonymous, provided the training is received from **men who know.**

JOHN DAVEY created Tree Surgery. The idea itself is his. The methods are his. All the advancement in this branch of science is the direct result of his work. The whole profession of the scientific treatment of trees radiates from this unique personality.

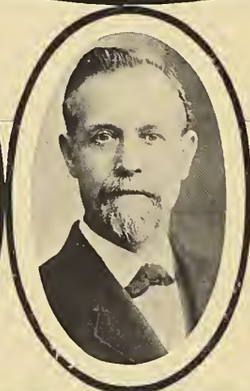
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(Signed) Isaac N. Seligman.

—

Peaslee-Gaulbert Company,
Manufacturers and Merchants,

Louisville, Ky.

It gives me pleasure to say that the work executed on my place was eminently satisfactory, in fact the only job I have ever had done that really measured up to my expectations.

(Signed) S. E. Duncan.

Court of
Common Pleas No. 5,

Philadelphia.

It gives me much pleasure to state that an examination of the trees upon our "Guynedd" place evidences that in every case the process of healing is going on most satisfactorily. This is especially so in the case of a large maple tree at the side of the house, which had so much of the bark removed that I rather despaired of saving the tree.

This tree has been in a more healthful condition than it has been in for years. Mistaken butchery of the tree and excessive use of crude carbolic acid upon the bark, had well nigh destroyed it. Your intelligent and skillful efforts have saved it. The death of a fine old tree is a tragedy, and the prevention of such death is indeed an evidence that your work is along the lines of "an established science, which distinguishes 'surgery' from 'butchery.'" The two unusually intelligent young men, sent by you to do the work, showed thorough competency and skill, combined with the conduct and deportment of courteous gentlemen.

(Signed) William H. Staake.

John DaVey, Father of Tree Surgery



TREE BUTCHERY

The Davey Institute of Tree Surgery

is maintained by the company at very heavy expense for the sole purpose of schooling its men regarding tree life, insects enemies of trees, tree diseases, proper remedies, and—most important of all—the theory and practice of Tree Surgery, which cannot be obtained elsewhere. They are specialists in the treatment of trees. There are **no** successful imitators.

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The service of the Davey Tree Expert Company is available east of the Missouri River for those who desire quality at a cost which is not in any sense unreasonable. Send today for handsome booklet and full information. When you write, tell us how many trees you have, what kinds and where located.

The Davey Tree Expert Company, Inc.
453 Acorn Street, Kent, Ohio



IMITATION TREE SURGERY



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HENRY H. SAYLOR, EDITOR

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THE HOME OF MR. W. H. HART, CORNISH, NEW HAMPSHIRE

Mr. Hart has added to the list one more striking example of the possibilities that lie in old farmhouses. With very slight alterations and a particularly well thought out planting scheme, he has transformed this century-old house into a most attractive country home

House & Garden

Volume XIX March, 1911 Number 3



Whether your place is one of several acres, or merely a plot 50 x 150 feet, you should have a hotbed or a coldframe to gain a month on summer every year and to carry over through the winter tender plants that cannot survive exposure

Hotbeds and Coldframes: What They Are and What They Will Do

BY C. H. MILLER

Photographs by the author and others

NO garden is complete without a hotbed. It not only furnishes an outlet for your pent-up energies when the March sun feels good on the back of your neck and you long to get out and dig in the soil, but by means of hotbeds and coldframes the bearing season of your garden may be extended several months. You can raise an abundance of flowers from seeds at very little cost and with reasonable assurance of having them succeed when the warm weather comes and they are set out in the open, and the tiresome two months' wait after the seedman's catalogue arrives and before anything can be planted, is reduced to immediate action. By means of a few glass sash, the winter of our discontent is made glorious summer. As Kipling says:

"The cure for this ill is not to sit still
Or frowst with a book by the fire
But to take a large hoe and a shovel also
And dig till you gently perspire."

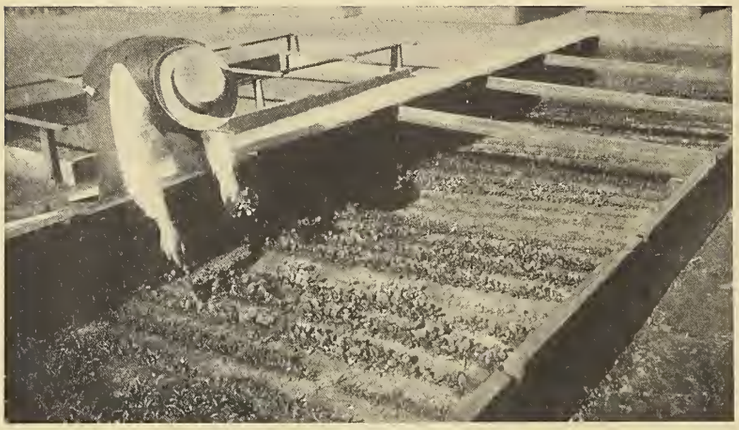
But enough of the poetry of hotbeds: What are the facts? With a hotbed you can have garden stuff two months ahead of your neighbor who plants in the open. With a coldframe, you can beat him by one month. Think of sweet corn by June 30th, and cosmos that really blooms before the frost nips it.

It is always a problem for the amateur gardener to know when to plant his seeds. A safer rule than any arbitrary calendar date is this: When the peach and plum trees blossom, the average temperature is 45 degrees in the shade, and the seeds that will germinate at this temperature are beets, carrots, cabbage, cauliflower, lettuce, parsley, onions, radishes and spinach. You must however, wait for the apple trees to blossom, showing that the average temperature is 60 degrees in the shade, before you can be sure that corn, melons, egg-plants, tomatoes, beans, cucumbers and peppers will sprout.

For these more tender things the hotbed is used. By starting



You can knock together a plank frame, buy two or three sash and plant a lot of flower and vegetable seeds now, that will bring plants into bearing and bloom ahead of your neighbor's



Transplanting seedlings from the flats in which they were started to a coldframe, in which they may be "hardened off," and later transplanted to the open

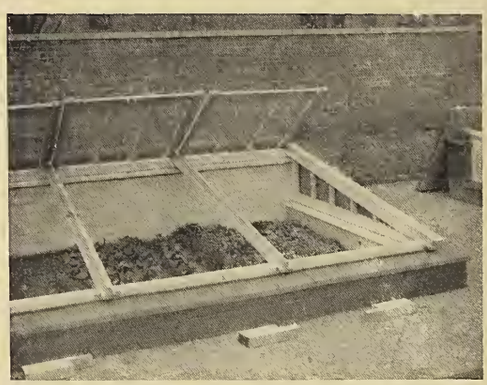
the seeds early we can have large stocky plants to set out just when our neighbor may be planting his seeds. Every day that we gain over him will count on the other end of the season when bearing time comes.

The difference between a hotbed and a coldframe is this: Coldframes are warmed only by the sun; hotbeds are artificially heated by the fermentation of an under layer of fresh stable manure mixed with leaves. The frames themselves are practically the same structurally, except that usually a coldframe simply rests on the surface of the ground and may be moved from place to place, while a hotbed is a more permanent structure, with a subframe extending into the ground to keep the heat in and the cold, moles, vermin and other things out.

The makers of greenhouses and sash have made it very simple for anyone to have a coldframe. They are shipped, "knocked down," and can be set up and nailed together with very little trouble. The sash for coldframes and hotbeds cost about $3.50 each, and the frame itself can either be made at home by anyone who is handy with tools, or it can be bought quite reasonably—a frame for two sash costing $7.50, with $1.50 extra to be added for each additional sash. The standard size of hotbed sash has by convention come to be three feet by six, although of course any size of sash may be used.

The frame for hotbeds should be located to face the south or southeast, with a building or fence on the north to shelter it from the cold winds.

While a coldframe may be moved from place to place, it is better to decide upon a permanent location and to build it so that it may also be used as a hotbed if we desire. In this case the subframe will make it impracticable to move it after it is once set up. The sides of coldframes are usually of wood but they may also be made of brick or concrete. The latter is very satisfactory and of course will never rot away. In making a concrete hotbed, first dig a pit or trench about three feet deep and of the proper size to hold the sash. As the entire interior of the hotbed will have to be excavated to a depth of three feet to put in the layer of green manure, all the excavating may as well be done at this time. To make the sides, wooden forms will be necessary. The usual method is to use rough hemlock, 1 x 10 in. A 12-foot board will cut to advantage in making the inside form and a 14-foot board for the outside.

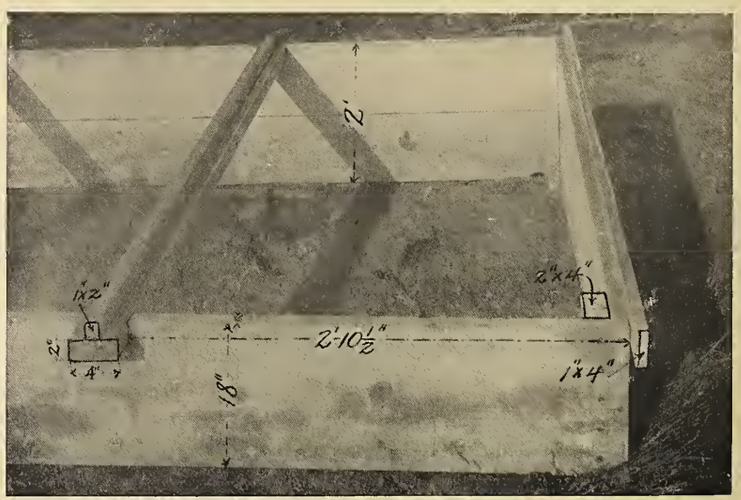


If you build a permanent structure to support the sash you can use it in the early spring as a hotbed and throughout the winter as a coldframe

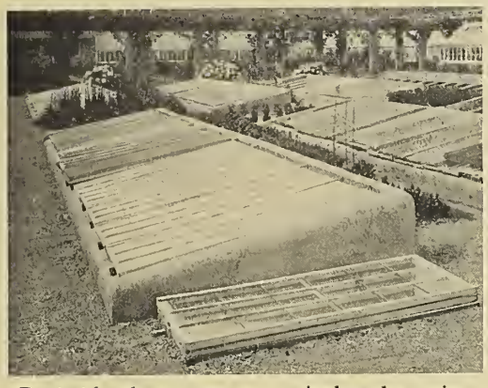
The usual method for working in concrete should be followed, making a mixture of one part of Portland cement to three parts of sand. Fill up the form with an aggregate of broken stone or cinders and "grout" it with liquid cement mixture. The board form above ground should be carefully made to insure a neat job, and a slope should be provided, making the frame say a foot above ground in the front and eighteen inches in the back. The corners of the frame should be reinforced with pieces of old wire or angle irons imbedded in the concrete.

For the hotbed, you will dig out a pit at least three feet deep. Into this a layer of fresh stable manure and leaves is placed which, however, has previously been thoroughly mixed and left outside in a heap to work off its surplus heat. The temperature of fresh manure that is fermenting will sometimes run up to 120 degrees, which of course is much too hot for growing plants. For this reason it is well to allow the mixture of manure and leaves to cool for several days. After a time a temperature of about 90 degrees can be maintained with very little difficulty.

The manure must be thoroughly packed as it is placed in the pit by tramping on it, adding manure until you have a depth of two feet or more. The packing is very important. When the required depth is obtained, put on a nine-inch layer of finely pulverized soil which is raked smooth and leveled with a board.



The figures show the sizes of the various parts and their proper relation for a frame to hold the standard 3 x 6 ft. sash



Probably the most economical and serviceable structure is one made of concrete. With some boards, cement and sand you can make one yourself

It is well to have a cheap thermometer in the hotbed to keep track of the temperature.

You are now ready to plant. There is such a difference of opinion as to the care of hotbeds and coldframes that only the most general directions can be given. It may be said that the object of both is to duplicate by artificial means the warm temperature of summer, when the weather outside is really freezing. In the latitude of New York we can plant our hotbeds in February but it is not safe to start a coldframe before the end of March.

It is idle to deny that hotbeds require care. At night the sash must be covered with mats to keep out the cold and in the morning these must be removed to admit the sunlight. Ventilation is also important.

Here are some of the ways in which a hotbed or coldframe will be most useful:

To start seeds of plants and flowers months before they could be planted out-of-doors. This in itself would be no great advantage if the season of bloom were simply moved forward a few weeks, ending that much sooner. In many cases, however, it means that you will get bloom where otherwise there might be none—with cosmos, petunias, verbenas, ageratum, stocks, and many others.

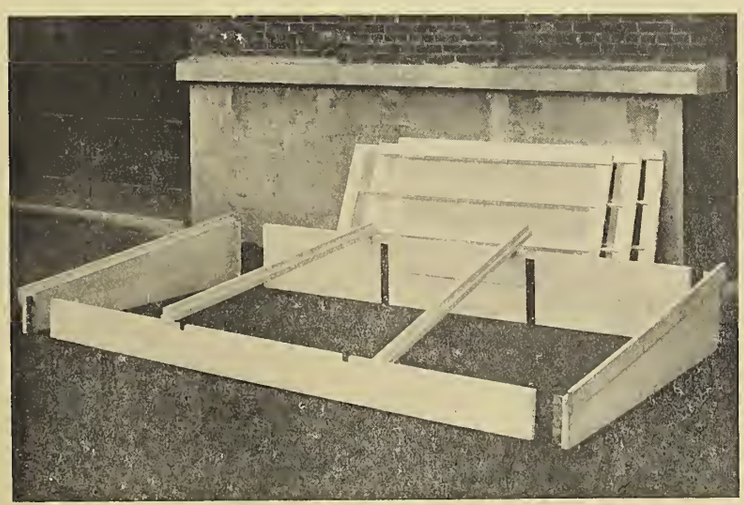
To winter the plants that freezing weather would kill, such as tender hydrangeas, geraniums, tea roses and various bedding plants.

To force such plants as asparagus or rhubarb to bear while the ground outside is still frozen.

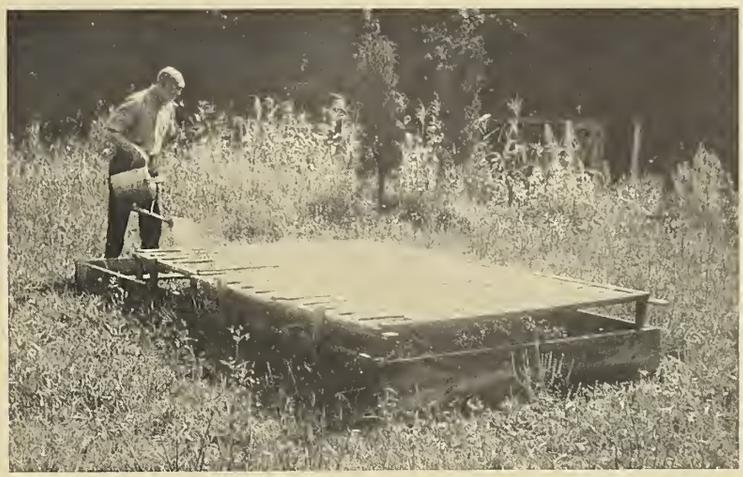
To take care of seedlings that have been started in greenhouses or indoors in window-boxes.

To have green vegetables all winter, such as chard, parsley, lettuce, and spinach. And to start vegetable seeds a month or two before they can be planted in the open.

In order to avoid the necessity of using mats or shutters to protect the glass sash at night, some of the builders manufacture double-light sash in which an air space between the two pieces of glass acts as an insulator, keeping the cold out and the heat in. The advantage of this kind of sash is that mats are not necessary.



If you are not enough of a carpenter to build the frame yourself you can buy one in this "knock-down" form and readily put it together



Another use for your frame is to plant in August seeds of perennials which, with care, will grow large enough to be transplanted to their permanent quarters in the fall, to bloom next year



The compost of leaves and fresh horse manure, before going into the bed, must be turned over several times at intervals of a few days, in order to work off the surplus heat

To prepare a coldframe, first spade up the soil to a depth of a foot, working it over and over until all the lumps are broken up and it is fine and mellow. Some well rotted manure should be worked through the soil to make it rich.

Where a coldframe is used to grow vegetables that will ultimately be planted in the open ground, to avoid the danger of disturbing the roots in transplanting, it is well to plant the seeds in small paper flowerpots, berry-boxes or even small paper boxes. The seedsmen will supply paper pots that can easily be taken apart.

A very convenient type of coldframe that is similar in its use to the bell-glasses of the French gardener is the so-called "melon frame." It is much smaller than the regulation coldframe and may readily be moved from place to place. Melon frames may be set about through the garden wherever we ultimately intend to have hills of melons, squash or cucumbers and the seeds forced in the very place where they will ultimately grow, without the necessity of transplanting. By the use of one of these frames a neighbor of mine has had ripe cucumbers by July 4th, yet the old rule is not to plant cucumber seed until June 20th.

Growing plants need not only sunlight but also air. A plant that has been growing in the warm, moist atmosphere of a hotbed would, if suddenly moved to the open ground where the temperature may be twenty degrees lower, soon wither and die. For this reason a hardening process must be followed by raising the

(*Continued on page* 194)



Most people have great difficulty in picturing to themselves the appearance of a home before it is built. A model, built to scale, will solve the problem, and prevent disappointment with the finished building

The Small Model as an Aid in Building a Home

MADE OF CARDBOARD, SANDPAPER, CELLULOID, SPONGES, BIRD-GRAVEL AND WHAT-NOT—IT SHOWS A HOME-BUILDER WHAT HIS HOME WILL REALLY BE LIKE

BY LAWRENCE VISSCHER BOYD, A. A. I. A.

WHEN an architect has designed the plans and elevations of his client's house, his troubles have just begun. Nearly every client —or his wife—thinks he or she can read plans perfectly, and after doing so knows exactly how the house will look when completed. But reading plans is not easy. In fact, to the average layman a plan is about as intelligible as Greek or Sanscrit, so it is no wonder that when the work is actually in progress, the owner "didn't know it was going to look like that," or his wife, "cannot understand why there isn't a bay-window in the den instead of a casement."



Rough-cast stucco walls are well represented by sandpaper. The roof is of overlapping layers of thin cardboard

Of course it is the architect's business to please, but it takes the proverbial patience of Job to handle the man who, in the first place, doesn't know exactly what



The trees are made of small pieces of sponge, dyed green and placed upon twigs



Grass may be sown, ready cut, by scattering it upon cardboard covered with glue

he wants, who cannot get the picture of the house in his mind's eye, and who changes his mind with every suggestion made by his admiring (or otherwise) friends.

While working upon a prize competition for a small country house, I became impressed with the possibilities of the model as a valuable adjunct to the regular plans. I had been somewhat puzzled as to the treatment of a garden scheme. I was not quite sure how it would look, myself. So for my own satisfaction I set about having a cardboard model made of the house and grounds. Some of the accompanying photographs show the result. The appearance of this miniature dwelling is very realistic. No one would suppose that the hedges and trees were made of sponges stained green; that the trailing vines on the house, the various vegetables and choice flowering plants were odds and ends, glued into place, trimmed to shape, and colored to represent geraniums, crimson ramblers, or other flowers. Gravel, such as you purchase for your canary bird, furnishes walks wonderfully natural in appearance. The grass is sprinkled (ready grown) on a glue-wet board, and only needs to be "mowed" in places to present a smooth, even surface.



Windows are made of celluloid sheets, upon which white ink lines represent the divisions between the panes



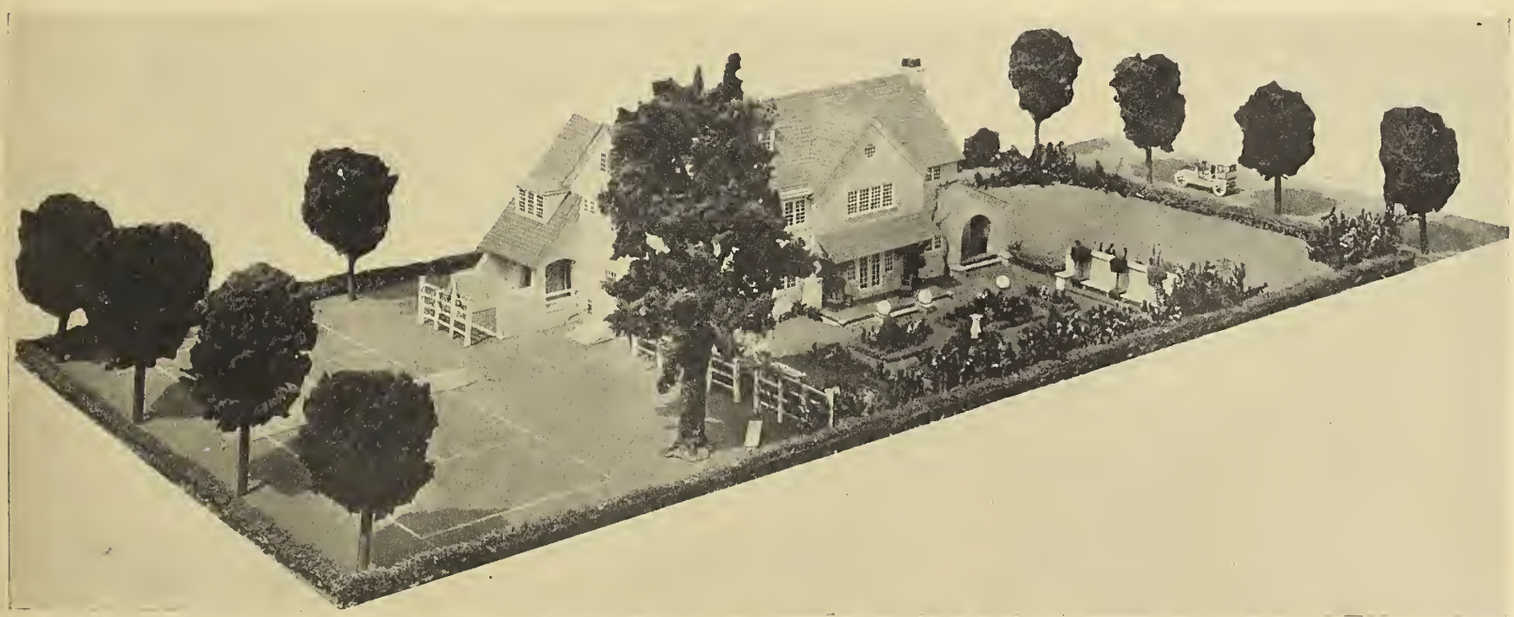
It is only by the aid of a complete model that the building site, as a whole, may be visualized — gardens, lawn, shrubbery groups, trees and walks

A case in point that should establish beyond a doubt the value of the model house, may prove interesting. Not long ago a man for whom I was designing a twenty - thousand - dollar house came into my office. He seemed greatly upset.

"Mr. Boyd," said he, "I'm in a quandary. My wife has an idea that the house won't suit." I was surprised. The drawings for his house were nearing completion. I had worked out with infinite pains a plan and elevation that I knew to be good, one which I felt sure was what he desired. I could not understand the reason for his wife's attitude, and told him so.

"I'm sorry," he said, "but she has been going over the plans. She says that she cannot understand plans at all. She wants to see what the house will really look like when finished." Suddenly a happy thought me. "Well, then we'll show her," I said, "we'll make her a model of the house and grounds as they would appear in reality."

That day the model was started. From the scale drawings the house was built, the grounds laid out, until at the end of a few weeks it stood, a perfect miniature of the structure I saw so well



It is difficult to know, without a complete model, whether your tennis court will have the disadvantage of being too near the kitchen porch, or whether this latter may be effectively screened off

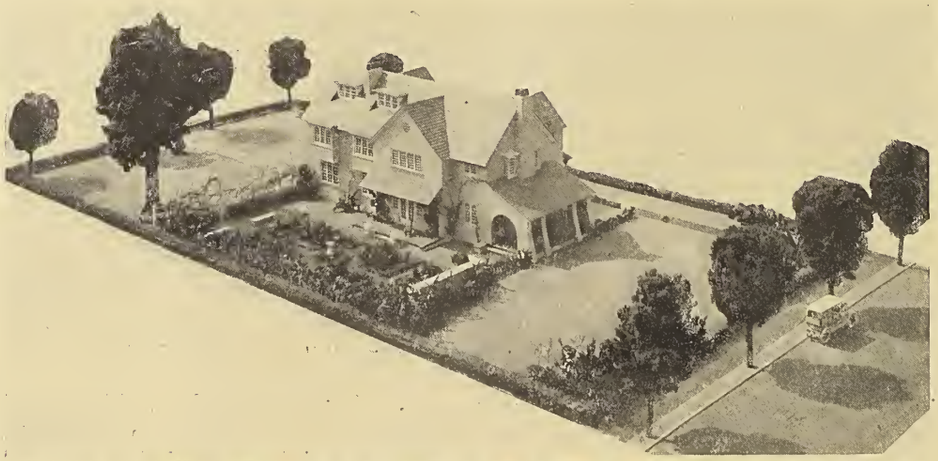
in my mind. Then my clients were sent for. The result was more gratifying than I had dared to hope. They were astonished, enthusiastic. From every side they viewed it. Nothing escaped their notice, from the tiny chimney pots to the benches in the formal garden. Then the woman turned to me and held out her hand. "Oh, it's charming," she said, "though I had no idea it was that kind of a house. Why, it's just what I want."

Needless to say, the house was built according to the original idea, to the satisfaction of all concerned, and stands today a testimonial to the use of the model in architecture.

The models here illustrated are of houses designed by the writer, which have been built. They were worked up from scale drawings, one-fourth inch to the foot, so that windows, doors, porch posts, chimneys, pergolas, etc., are in perfect proportion. As one walks from front to rear, from right to left, the question of "How will it look?" is completely answered. There stands the house with its red tile roofs, brown half-timber panels, and walls of light buff—representing plaster against a background of green lawn and trees, complete in every detail, from transparent windows to the smallest bit of shrubbery.



After you have set about making a model for the essentials, it will be surprising if you do not find yourself simulating every tiny detail



In order to prevent warping, it is better to use a base made up of cardboard layers glued together, rather than a single board

While the models illustrated show the work carefully carried out, they do not speak of the failures encountered in getting these results. The first experiments were made by using white pine wood as a base for these models, from which sides of cardboard were built up. The windows were of paper, while the roofs were worked out of colored cardboard. This experiment proved that wood of any kind was not serviceable, as it warped and cracked according to exposure to heat and cold. Wood was abandoned, and the base was then built of layers of cardboard, glued together and put under a press. This made an excellent base for the building, and was not affected by changes in temperature. Paper for windows was also abandoned; in its place was substituted celluloid, upon which white drawing ink outlined the muntins forming the divisions in the windows. Instead of cardboard in a sheet, laid off with lines to indicate the roof material, the roof was made of strips cut out of thin cardboard, colored to represent either shingles, slate or tile. These were laid overlapping each other, so as to show the proper exposure to the weather. The perpendicular lines, however, were indicated in ink. This effect

(*Continued on page* 178)





This model was made to show the exact effect of a proposed alteration to an existing building. The change is in the rear bay, which was rebuilt to give a small outdoor sleeping-porch

Choosing a Site for the Garden

THE ESSENTIALS IN EXPOSURE, CHARACTER OF SOIL AND DRAINAGE CONDITIONS THAT WILL, WITH REASONABLE CARE IN CULTIVATION, INSURE SUCCESS IN YOUR GARDEN THIS YEAR

BY M. ROBERTS CONOVER

Photographs by the author and others

OF all the important matters pertaining to the home surroundings, the choice of the garden spot ranks first, and in order that subsequent preparation be timely, this vital question should be decided early in the year.

Friable soil and good drainage, convenience, adequate size, sunlight, and shelter from bleak winds, are essential to the garden's success.

The first and main consideration is soil. The kinds of vegetables required of a garden are many and the drain upon the soil so exhaustive that its consistency must be such that the young plants easily find their nourishment. Clay is too stiff and sand holds little fertility. Favorable soil is a composition of several kinds. If you mix sand, clay and leaf-mould together in nearly equal proportions, you will gain some idea of the consistency of your garden loam.

If the ground is new to you and you are a novice at judging soils, you had better get some advice upon the subject. The experienced gardener or farmer cannot tell you just how much it will yield, but he knows clay from sand and he knows good loam. If he tells you the soil needs draining, and you can form moist handfuls of it into balls that hold tenaciously together, turn away from it. It will bake in dry weather and be soggy and unworkable in rainy spells. Drain it if you want to, but plant your garden somewhere else.

On the other hand, light, sandy soil, extending down a foot or so, with a substratum of more sand, lacks the necessary fertility for a successful garden. But if it is a loam with sand, clay and other matter in such proportions that it works mealy under the tools, and if it has a porous, rather sandy substratum, you have earth of the right consistency for a fine garden. The outcome depends upon generous manuring, wise planting and right cultivation.



If the soil, after rain, compresses into a pasty compact mass, turn to another spot for your garden site



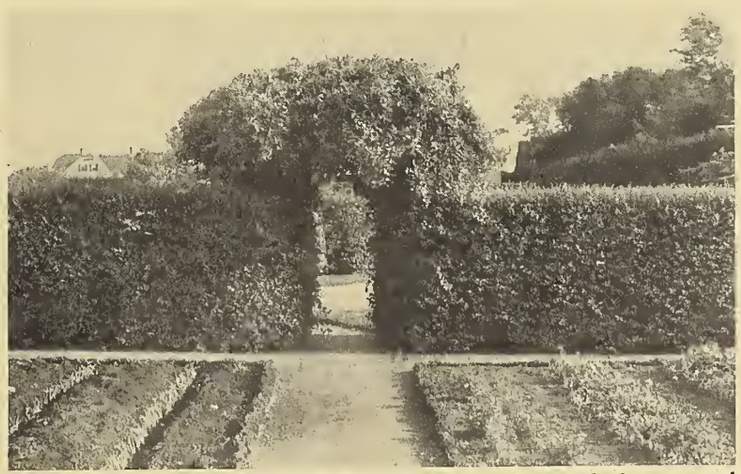
If the compressed ball of earth crumbles apart in the hands when released it is good garden loam

Where there is a substratum of stiff clay and the location is low, recourse must be had to artificial drainage in order to carry off the surplus water.

As a source of supply, the garden should be near the kitchen and large enough to supply the family's needs. It is folly, however, to plan for larger space than one can work—it will be overgrown and neglected by mid-summer. A garden requires frequent cultivation and wise supervision, but it need not demand more than an hour's work each morning, if one has the necessary tools and is thorough. Enthusiasm is half the battle, and grows with achievement. A garden space forty feet long and forty feet wide kept a family of five persons supplied with lettuce, beans, peas, beets, carrots, potatoes, radishes, parsley, cabbage, summer squash, egg-plant, and other vegetables, all summer and fall without much attention to second crops. It would have done more with closer planning. A smaller garden, carefully tended, will give surprising



Don't make your garden too big; a 40 x 40 ft. area kept five people well supplied, without much attention to second crops



If you have a hedge or other wind-break to the north, keep a path between it and the edge of the garden

results. But one should remember that the more intensively the ground is worked, the heavier must be its store of plant food.

The garden will be useful for a longer season if it has a southern exposure and a good wind-break on the north and west. For warmth, there is nothing to compare with an arbor vitae hedge. It is advisable to plant this far enough away to prevent the roots from drawing upon the garden area. In my own garden, vegetables are grown two feet from such a hedge with good results. Here potatoes, radishes and peas were planted by March 22, in 1909 and 1910, and lettuce, spinach, carrots, early turnips and parsley by the 28th.

After the garden site has been chosen, and its extent decided upon, the ground should be spread with manure which is allowed to lie on the surface until time to plow. Half a ton or a one-horse load of well rotted compost or cleanings from the poultry house will make a garden area of sixteen hundred square feet very productive. The cleanings from the hennery promote the greatest yield, but the rotted manure enables the garden to better withstand dry weather. Judging from results obtained the past two years, it is well to use equal parts of each manure. The compost, being slower to decompose, supplies the late growing vegetables, while hen manure is sooner available as an aid to the earlier maturing vegetables. This adaptation of treatment to the individual requirements of different plants counts greatly for your success.

Designing the Dining-room by Itself

SUGGESTIONS FOR THE ARCHITECTURAL TREATMENT, THE CONSISTENT FURNISHING AND THE BEST WORKING ARRANGEMENT OF THE USUAL SIZE ROOM



A mellow brown oak wainscot, Caen stone fireplace and sand-finished, dull golden wall above, help to make this Flemish dining-room a welcome change from Colonial or English

BY A. RAYMOND ELLIS

Illustrations by the Author

WE have a habit, generally, of making the dining-room either English or Colonial in style, I suppose for the reason that we have so many good types of furniture in these two styles that their use makes it easier to obtain an attractive dining-room. The room of Flemish character is probably more unusual and I have, therefore, chosen to offer a design in this style.

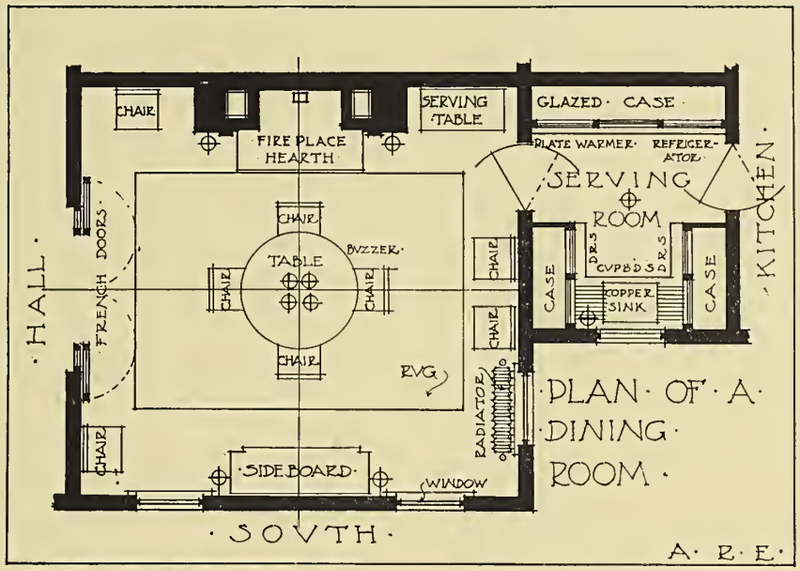
The room is 15 x 16 feet in size, opening from a broad hall from which it is shut off with glass doors. The morning sun, a very essential feature in any dining-room, is obtained through the eastern window and through the southern windows in the summer, while the after-glow of the summer sunset comes through the west window, thus insuring a pleasant dining-room at all times. There is nothing so cheerless as a breakfast-room which is cut off from the sun in the winter, by being isolated in the north or northeastern part of the house; it continually exerts a depressing influence on the family at meals.

The dining-room is adjoined by the serving-room, which connects with the kitchen, affording a quick and direct line of service.

It is suggested that the room be wainscoted in oak to a height of seven feet, with rectangular panels formed by very flat rails and stiles, without any panel moldings. A wide plate-rail forms the cap of the wainscot, affording a place to put bits of china and old pieces of pewter or copper. Above the wainscot the plaster is sand-finished, as is also the ceiling, and at the intersection of the ceiling and side walls a cornice is carried around the room. On the north side is a large fireplace, which is a necessity on a rainy day to make breakfast cheerful and the room comfortable. It is built of light gray Caen stone, which has almost the appearance of limestone. It is imported in blocks and is soft enough to be worked into a variety of shapes. The hearth has a curb border,

raised an inch or two above the level of the stone hearth in order to retain the ashes better. A heavy carved casing is carried around the stonework of the fireplace, surmounted by a carved shelf supported on heavy brackets.

French doors are an essential feature in the dining-room because they permit it to be shut off from the hall and kept warm, and they prevent interruptions during the dinner hour. As they are of glass they afford a view into the hall—a very attractive feature, which does away with that feeling of oppressiveness experienced sometimes from being shut up in a room with solid doors of wood. The floor is of oak, filled and given two coats of a finish which has a dull lustre and enough elasticity to make it durable. The floor should be of a shade that is not too light or so dark that it readily shows the dust.



The plan of the 15 x 16 ft. dining-room indicates an arrangement of the furniture that will carry out the dignified character of the room

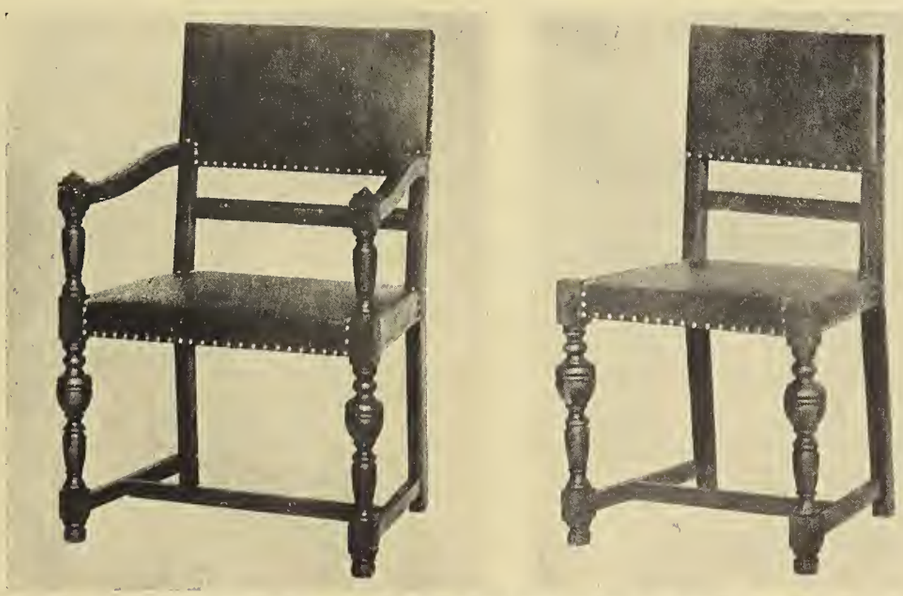
Opposite the fireplace is a position for the sideboard and there is wall space enough for a china-cupboard although I should prefer to omit this cumbersome piece of furniture, which everybody shuns with the admonition of childhood still ringing in his ears, "mustn't touch." Near the door to the serving-room is the proper place for the serving-table, and there remains plenty of wall space for chairs. By referring to the plan the position of these pieces of furniture will be made more clear.

The decoration of this room is a simple problem. On the floor there should be a rich-colored rug with deep reds in it, strong enough to afford a foundation for the dark sturdy Flemish furniture and the dark finish of the wainscot. Above the wainscot, the sand-finished ceiling and side walls should be sized and painted with three coats of oil paint of a dull golden shade which reflects a warm glow over the room when lighted. The rough texture of the sand-finish is well adapted for such use as this. Of course a frieze of foliated tapestry paper or real tapestry could be used with good effect, or even an oil-painted frieze representing a scene from medieval history is permissible. It is safe to say that all of these schemes would be good, though of course there would be a great difference in their cost. The radiator under the east window should be painted to match the color of the wainscot. To obtain the correct shade for this wainscot, the wood should go through several processes of staining. The first coat is a deep penetrating stain of burnt Sienna hue to form a mellowing base, similar to the warm colors the old masters used in their paintings. This makes a warm color to reflect through the succeeding coats of darker stain, each coat of which should be rubbed into the wood and any superfluous stain rubbed off, exposing each time the high lights of the wood's grain. The final coat should be a thin coat of wax or a flat-drying oil paint to give the wood a dull lustre.

The furniture should be of the Flemish type, preferably a shade lighter or a shade darker than that of the finish of the woodwork, in order to give contrast. The dining-room table should be a modern extension table with heavy turned legs, which would of course be repeated in the sideboard, serving-table and chairs. This type of furniture depends entirely for its beauty upon its plain sturdy lines and simple turnings. The chairs should have leather seats and backs, studded with copper nails. The brasses of the fireplace should be of odd design and the electric lights and fixtures should be of old brass to add a touch of color to the dark wood finish.

It seems hardly necessary to mention that the lights of this room should be governed by an electric switch, and an electric bell on the table should ring a buzzer in the serving-room.

In the serving-room there is a counter shelf two feet eight inches high on each side wall, over which there are glazed cases with sliding doors to contain the china. Under the window there is a sink for the washing of fine china, glass and silver, which should not go into the kitchen with the heavier dishes. Under the counter are cupboards and drawers and at one end a plate-warmer and a small refrigerator, in order that one may obtain a bite to eat late at night without having to go through the kitchen to the kitchen pantry—which is sometimes awkward if there is no servant's dining-room and the maid is entertaining.



You can have your Flemish furniture designed and made to order, or you can buy excellent reproductions of old models, such as these

The finish of the room would cost approximately $575 in selected white oak. The mantel alone is worth $80 and the wainscot about $300. The furniture for the room, made from detail drawings, would cost about $450 in oak and leather.



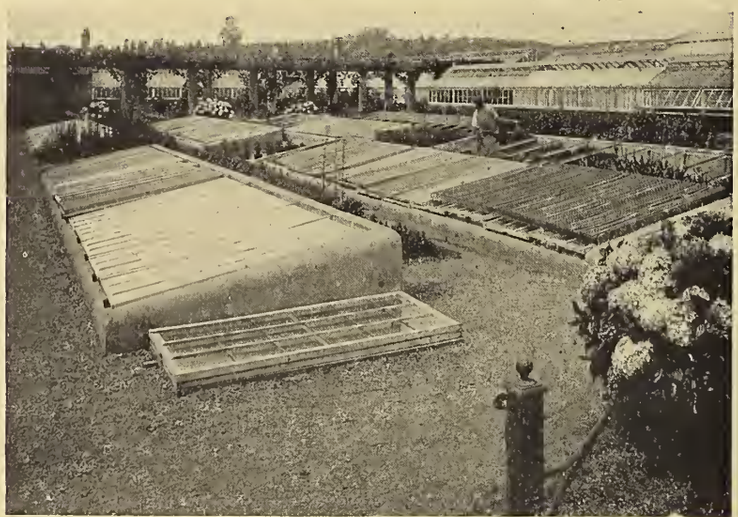
Garden steps of stone are expensive, those of brick are difficult to keep in repair, but those of concrete, if designed with some skill, have neither of these disadvantages



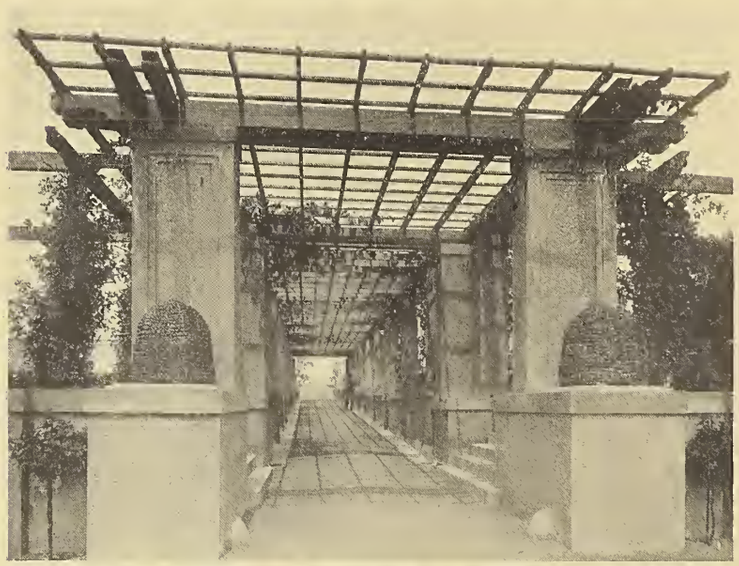
There is an excellent suggestion here for making a garden wall effective and attractive. Train young fruit trees to cover the monotonous expanse of gray rough-texture concrete



Too frequently we see concrete pergolas of crude form. Greater care and skill in making the molds will work wonders



The decay and warping of wooden hotbeds and coldframes is a common fault. Concrete frames will last forever



By means of paneling and a variety of textures on the different surfaces, concrete garden structures may be made far more interesting



Covered with vines and banked with shrubbery, the concrete garden wall blends with the lansdscape as do the old stone walls of Italian gardens

CONCRETE POSSIBILITIES IN THE GARDEN



You can, and should, have fruit trees in your garden, however small it may be. Even if there is no open ground, there is surely a place for training trees on a lattice or wall

Grow Your Own Fruit

WHEN AND HOW TO PLANT THE YOUNG TREES—THE CHOICE BETWEEN ONE-YEAR AND TWO-YEAR TREES—THE MATTER OF PRUNING—CULTIVATION AND FILLER CROPS

BY F. F. ROCKWELL

Photographs by Nathan R. Graves and E. F. Hall

[*Mr. Rockwell's series of articles that appeared last year in these pages, under the title "Grow Your Own Vegetables," met with so many expressions of appreciation that we are doubly glad to follow it with three articles on an equally important phase of the home garden. The first article, which appeared last month, took up the important matter of selecting the varieties best suited to the needs of the home orchard.*—EDITOR.]

THE first article on this subject dealt with the question of varieties for the home orchard. This matter is so important that I want to emphasize it by repeating one bit of advice given: make out your list to the best of your judgment from what information you may have or be able to get from observation or nursery catalogues, and then submit it to your State Experiment Station for approval. The chances are that some of the good varieties will not do so well as others in your particular locality. Find out before you plant.

As a general thing you will succeed best if you have nothing to do with the perennial "tree agent." He may represent a good firm; you may get your trees on time; he may have a novelty as good as the standard sorts; but you are taking three very great chances in assuming so. But, leaving these questions aside, there is no particular reason why you should help pay his traveling expenses and the printing bills for his lithographs ("made from actual photographs" or "painted from nature," of course!) when you can get the best trees to be had, direct from the soil in which they are grown, at the lowest prices, by ordering through the mail. Or, better still, if the nursery is not too far away, take half a day off and select them in person. If you want to help the agent along present him with the amount of his commission, but get your trees direct from some large reliable nursery.

Well grown nursery stock will stand a good deal of abuse, but it won't be at all improved by it. Don't let yours stand around in the sun and wind, waiting until you get a chance to set it out. As soon as you get it home from the express office, unpack it and "heel it in," in moist, but not wet, ground; if under a shed, so much the better. Dig out a narrow trench and pack it in as thick as it will go, at an angle of forty-five degrees to the natural position when growing. So stored, it will keep a long time in cold weather, only be careful that no rats, mice, or rabbits reach it.

Do not, however, depend upon this knowledge to the extent of letting all your preparations for planting go until your stock is on hand. Be ready to set it the day it arrives, if possible.

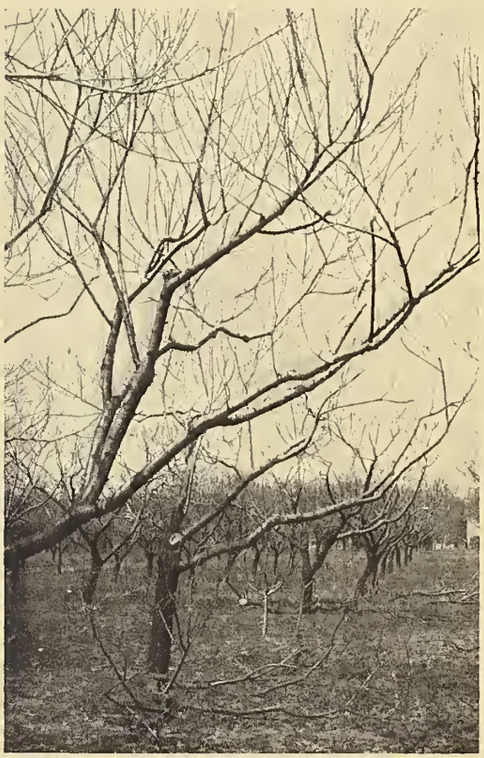
PLANTING

Planting can be done in either spring or fall. As a general rule, north of Philadelphia and St. Louis, spring planting will be best; south of that, fall planting. Where there is apt to be severe freezing, "heaving," caused by the alternate freezing and thawing; injury to the newly set roots from too severe cold, and, in some western sections, "sun-scald" of the bark, are three injuries which may result. If trees are planted in the fall in cold sections, a low mound of earth, six to twelve inches high, should be left during the winter about each, and leveled down in the spring. If set in the spring, where hot, dry weather is apt to follow, they should be thoroughly mulched with litter,

straw or coarse manure, to preserve moisture—care being taken, however, against field mice and other rodents.

The trees may either be set in their permanent positions as soon as bought, or grown in "nursery rows" by the purchaser for one or two years after being purchased. In the former case, it will be the best policy to get the strongest, straightest two-year stock you can find, even if they cost ten or fifteen cents apiece more than the "mediums." The former method is the usual one, but the latter has so many advantages that I give it the emphasis of a separate paragraph, and urge every prospective planter to consider it carefully.

In the first place, then, you get your trees a little cheaper. If you purchase for "nursery row" planting, six to seven feet two-year old apple trees, of the standard sorts, should cost you about thirty cents each; one-year "buds," six feet and branched, five to ten cents less. This gain, however, is not an important one—there are four others, each of which makes it worth while to give the method a trial. First, the trees being all together, and in a convenient place, the chances are a hundred to one that you will give them better attention in the way of spraying, pruning and cultivating—all extremely important in the first year's growth. Second, with the year gained for extra preparation of the soil where they are to be placed permanently, you can make conditions just right for them to take hold at once and thrive as they could not do otherwise. Third, the shock of transplanting will be much less than when they are shipped from a distance—they will have made an additional growth of dense, short roots and they will have become acclimated. Fourth, you will not have wasted space and time with any backward "black sheep" among the lot, as these should be discarded at the second planting. And then there is one further reason, psychological perhaps, but none the less important; you will watch these little trees, which are largely the result of your own labor and care when set in their permanent positions, much more carefully than you would those direct from the nursery. I know, both from experience and observation, how many thrifty young trees are done to an untimely death by children, careless workmen, and other animals.



An orchard, after winter pruning. The trees are forced out laterally

So if you can put a twelve-month curb on your impatience, get one-year trees and set them out in a straight row right in your vegetable garden where they will take up very little room. Keep them cultivated just as thoroughly as the rest of your growing things. Melons, or beans, or almost any low-growing vegetable can be grown close beside them.



Fruit trees trained against the garden wall. It is easier, however, to grow them in the open

If you want your garden to pay for your whole lot of fruit trees this season dig up a hole about three feet in diameter wherever a tree is to go permanently. Cut the sod up fine and work in four or five good forkfuls of well rotted manure, and on these places, when it is warm enough, plant a hill of lima pole-beans—the new sort named Giant-podded Pole Lima is the best I have yet seen. Place a stout pole, eight to ten feet high, firmly in each hole. Good lima beans are always in demand, and bring high prices.

Let us suppose that your trees are at hand, either direct from the nursery or growing in the garden. You have selected, if possible, a moist, gravelly loam on a slope or slight elevation, where it is naturally and perfectly drained. Good soil drainage is imperative. Coarse gravel in the bottom of the planting hole will help out temporarily. If the land is in clover sod, it will have the ideal preparation, especially if you can grow a patch of potatoes or corn on it one year, while your trees are getting further growth. In such land the holes will not have to be prepared. If, however, you are not fortunate enough to be able to



A dwarf cherry. The dwarf varieties are cheaper in first cost, and bear two years earlier; but the standard sorts are considered better

devote such a space to fruit trees, and in order to have them at all, must place them along your wall or scattered through the grounds (as suggested in the diagram in last month's article), you can still give them an excellent start by enriching the soil in spots beforehand, as suggested above in growing lima-beans. In the event of finding even this last way inapplicable to your land, the following method will make success certain: Dig out holes three to six feet in diameter (if the soil is very hard, the larger dimension), and twelve to eighteen inches deep. Mix thoroughly with the excavated soil a good barrowful of the oldest, finest manure you can get, combined with about one-fourth or one-fifth its weight of South Carolina rock (or acid phosphate, if you can't get the rock). It is a good plan to compost the manure and rock in advance, or use the rock as an absorbent in the stable. Fill in the hole again, leaving room in the center to set the tree without bending or cramping any roots. Where any of these are injured or bruised, cut them off clean at the injured spot with a sharp knife. Shorten any that are long and straggling about one-third to one-half their length. Properly grown stock should not be in any such condition.



Peach trees come into bearing in three years, so they are frequently used as "fillers" between the rows of slower trees

Remember that a well planted tree will give more fruit in the first ten years than three trees carelessly put in. Get the tree so that it will be one to three inches deeper in the soil than when growing in the nursery. Work the soil in firmly about the roots with the fingers or a blunt wooden "tamper;" don't be afraid to use your feet. When the roots are well covered, firm the tree in by putting all your weight upon the soil around it. See that it is planted straight, and if the "whip," or small trunk, is not straight stake it, and tie it with rye straw, raffia or strips of old cloth—never string or wire. If the soil is very dry, water the root copiously while planting until the soil is about half filled in, never on the surface, as that is likely to cause a crust to form and keep out the air so necessary to healthy growth.

Prune back the "leader" of the tree—the top above the first lateral branches, about one-half. Peach trees should be cut back more severely. Further information in regard to pruning, and the different needs of the various fruit in regard to this important

(*Continued on page* 178)

The Real Meaning and Use of Architectural Detail

III. THE ITALIAN RENAISSANCE—THE REBIRTH OF CLASSIC FORMS IN THE FIFTEENTH CENTURY—THE SOURCE FROM WHICH ALL THE LATER WORK OF EUROPE WAS DERIVED

BY LOUIS BOYNTON

[*A series of articles by prominent architects appeared in this magazine last year. In it the characteristics of the more common architectural styles, used for country houses, were outlined and explained. Another matter of great importance to those who would build consistently is the detail. Mr. Boynton's series of articles aims to explain the origin and use of motives, ornament and molding characteristics in connection with the better known styles of architecture. The articles that have appeared are: Colonial Detail, Jan.,* 1911, *and The English Renaissance, Feb.,* 1911.—EDITOR.]

THE architecture of the Renaissance in Italy was the source from which all the later work of Europe was derived. The Gothic style had run its brief but glorious course and the Italians reverted to the earlier forms of art which were their proper heritage. We are, I think, too apt to overlook the fact that the Italian of the fifteenth century was the lineal descendent of the ancient Roman. While there had been an admixture of races and while the artistic traditions of the earlier times had been forgotten, it was perfectly natural and right for them to return to the forms and principles of the earlier work. Of course the work of the Gothic school scarcely touched Italy. While France, Germany and England were building Gothic churches, the Italians were living in a sort of backwater of Byzantine art.



Type of Italian Renaissance detail, of which reproductions in cement are obtainable

The word Renaissance means a rebirth and the accepted meaning of the term as applied to architecture and decoration is a revival or rebirth of *Classic* forms. This does not mean a slavish copying of Roman work but an intelligent adaptation of the motives and principles of Classic art to the peculiar conditions of the times.

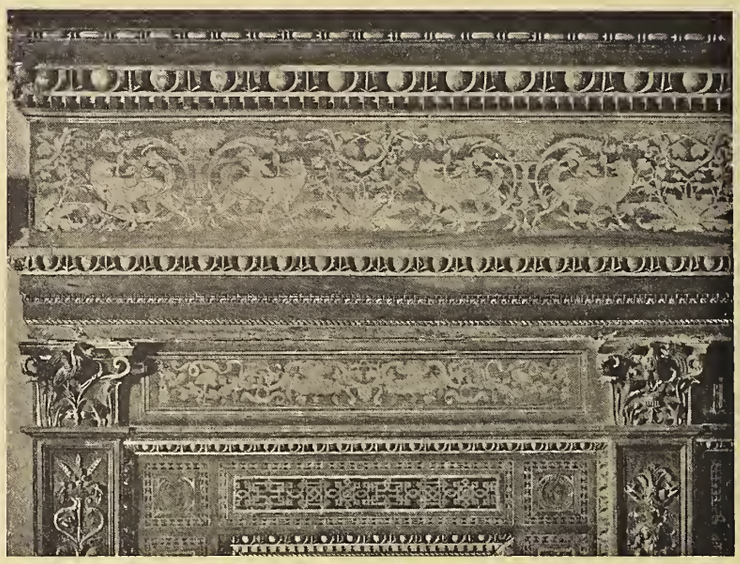
It has been said with much truth that St. Francis of Assizi gave the impulse which resulted in the Renaissance. His teaching that life was a beautiful thing and that it should be joyous, as distinguished from the repressed formalism of the monkish rule, was a preponderating influence in starting the movement towards intellectual and artistic freedom from the traditions of the immediate past. These ideas tended to open the minds of men and women also, to the beauties of the literature and art of Classic times. Italy had been dominated by an absolutely dry and formal expression of art which was the result of Byzantine influence, and the sud-



Characteristic treatment of a pilaster. Used in a church, but the ornament has no symbolic significance



A characteristic treatment of a marble frieze



An inlaid wood screen that shows the extent to which the Italian designers carried their decoration when the material permitted

den casting aside of this precedent was one of the most wonderful and interesting events of history.

The Renaissance of art in Italy was only a part of a larger movement. The revival of interest in, and knowledge of, Classic literature was quite as important; and the whole movement marked a capacity for appreciating, and more especially *enjoying,* the older art. For the whole Renaissance movement was essentially joyous; and any understanding of it must take into account the fact that the work was done for pleasure and not as the result of cold theory as to what was the correct thing to do. This cutting loose from the purely conventional. Byzantine art naturally accompanied an awakening or freshening of perception. People began not only to think apart from tradition, but the artists began to see and paint nature instead of symbols, and the whole period marked a true Renaissance of mind and spirit which resembles the golden age in Greece more nearly, perhaps, than any other period. In considering the detail of the Renaissance it is of course necessary to select some elements to be considered in a paper of this length; consequently I shall take up only some of the more common forms and such as may be applied to modern conditions.



Characteristic panel decoration in a ceiling; the ornament almost invariably fills the space



The use of pilaster and frieze was common in the treatment of doorways

It is increasingly easy to get good reproductions of such things as mantels, vases, seats, etc., in cast cement or the various forms of imitation stone. These may be obtained at a comparatively small expense and are within the reach of the owner of the most modest home. In fact, there are excellent reproductions of mantels which may be had for less than any wood mantels except the most brutally commercial kinds.

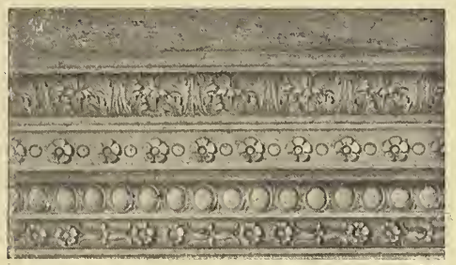
In decorated moldings we find the egg-and-dart, lamb's-tongue and dentils in common use which were described in connection with Colonial work in the January number.

In addition there is the bead, or bead-and-reel, which was occasionally used in Colonial work. This bead-and-reel consists of an elongated form like a small reel separated by beads or buttons, and is commonly found in cornices, below the crowning molding and in lines in the architrave. The upper molding of a cornice was often decorated with leaf forms, and these were often very interesting. As in the detail illustrated here there were sometimes buds or flowers introduced with the leaves.

One of the most characteristic motives of the Renaissance was the decoration of the pilasters. This was accomplished by the use of leaf and plant forms interrupted by vases or sometimes heads. It was always arranged symmetrically on a vertical axis and there is a definite and well defined rhythm in the repeats. That is to say, the important accents were placed with a definite intention and so as to prevent



A detail from the altar of the Chapel of the Sacrament. Note the mischievous leer of the cherubim



Detail of a cornice. Nearly every molding was decorated

monotony without interrupting the feeling of vertical growth. This is very well illustrated by the two pilaster designs given here. There appears to have been absolutely no significance in the motives used; apparently they were employed frankly because they were beautiful or helped to produce a beautiful whole, and without any thought of symbolism. This is very characteristic of the spirit of the Renaissance.

I have seen very beautiful doorways on churches where the elements of the design were frankly pagan or at least non-religious. The two pilasters in the illustrations are from candelabra in the cathedral at Naples and there is not the faintest suggestion of any religious purpose. In fact the whole spirit of the Renaissance was frankly and purely esthetic; the sheer pleasure in the beautiful for its own sake was the dominating influence.

After the pilasters, the capitals were most interesting. The proportions and general sentiment of the conventional Corinthian capital was retained but the detail differed widely and there was much ingenuity shown in the design and a fine sense of the decorative value of detail.

The decoration in the fifteenth century work was almost always firmly confined by strong lines. The decoration of a panel or pilaster *filled* the space, and the ornament was not allowed to straggle over the plain surfaces.

The decoration of the frieze was another instance where much ability in design was shown. A common motive was the use of cornucopias combined with scrolls. There were many varieties of this motive and they show a fine sense of design. Garlands were also used as in all the forms of Classic decoration.

It is interesting to note the introduction of the cherubim on the altar of the Chapel of the Sacrament. This is of course an appropriate motive for such a place; but the faces are all smiling—almost grinning—and the expression of the eyes is as far from being solemn or even reverent as could well be imagined.

The rest of the detail of this fragment is an extremely good example of Renaissance ornament in its highest development. The quality of the modeling and the richness of invention in decoration confined in such narrow and formal limits, is an extremely interesting specimen of the work of the period.



Accurate reproductions in cement from the old mantels are readily obtained and are very effective



The garlands and heads in the frieze are typical, as is the reeding of the pilasters

While it may seem a far cry from the Italian Renaissance to the work of today, there is really a most intimate relation between the two periods. For almost all of our design is based upon the traditions and motives of the older period and there is an increasing tendency towards the application of Renaissance forms to modern work.

This wide and varied influence can best be appreciated by noting some of the characteristic motives and being on the lookout for their reduplication in modern buildings of good architecture, and it is interesting to see how often they recur even in the buildings we see about us every day.



The Italians invented this pilaster treatment — growth that is symmetrical on a vertical axis



The house appears large, but is in reality not of such great area in floor plan. The cross-bar of the H is but 18 ft. in depth

"Luckley," A Modern English Country Home

THE COUNTRY SEAT OF MR. AND MRS. E. D. MANSFIELD AT WOKINGHAM, BERKSHIRE—ERNEST NEWTON, ARCHITECT—AN EXAMPLE OF THE BEST RECENT ENGLISH DOMESTIC ARCHITECTURE

BY P. H. DITCHFIELD

ONE of the best of the lesser country houses which have been built in England in recent years is a house at Wokingham, Berkshire. Wokingham is an old town situated in the Forest of Windsor, wherein the kings from Norman times have loved to hunt the tall stags. It is an old-world town. Until a few years ago it remained in a sleepy, dead-alive state; but now it has roused itself and a large number of houses have sprung up like mushrooms, some of them strange freaks of architectural enormity, terrible examples of what not to build; but this one is so charming in every way that it merits special attention. It occupies the site of an old house which was pulled down some years ago. Lofty elms, birch and woodland surround it, and it has a stream running through the grounds, of which advantage has been taken in laying out the garden.

Mr. Newton's conception of the style of Luckley is probably based upon that of Inigo Jones. In plan it is an H house, upon which so many of the beautiful examples of Tudor in England were based. It is, however, no slavish imitation of ancient models, but the ideas are developed and adapted to modern needs. The old house based upon this plan had the hall in the centre and two wings, one occupied by the kitchen, buttery and servants' quarters, and the other by the solar, withdrawing-room and the apartments of the family. In this modern adaptation we find in one wing the sitting-room and in the other the dining-room, kitchen and domestic offices. The central connecting link between the two wings is occupied by the reception hall, staircase and a corridor leading from the drawing-room to the dining-room.



The walls are of vari-colored "clamp" brick from Chichester, with deep red bricks at the corners, around openings and in the belt course

The material of the house is brick, those used for facing being "clamp" bricks from Chichester. These are of various colors—deep ruby red, russet brown, grey and almost plum color. The angles of the walls and the margins round the windows are made with deep red kiln bricks. Rich red hand-made Kentish tiles cover the roof. The whole effect of color is quiet and



The English fireplace and its mantel treatment is in contrast to the American type

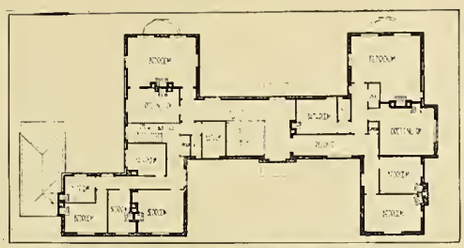


The hall, with its fire corner screened from the passage to the entrance hall. Teak blocks are used for the flooring, and oak paneling in the inglenook

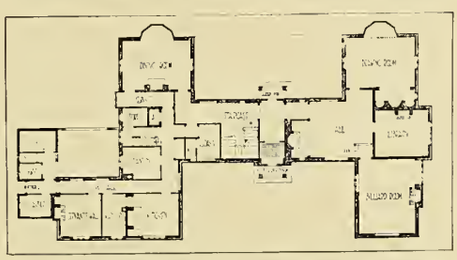
pleasant and quite different from the crude raw look of a new house when ordinary red bricks and tiles are used.

There are several notable features, among which may be noted the mullioned windows of two or three lights and the dentil course beneath the eaves. The projecting bow-windows are well conceived, and the porch with its curved head and pillared portico is characteristic of Mr. Newton's work. You will admire the chimney stacks, which are based upon some of the best models of Tudor building, and notice that the architect has not cramped himself by adhering to a perfect regularity of plan. Thus one wing, where the servants' quarters are, is larger than the other, and the central chimney is not in the centre of the middle roof. An attempt at absolute uniformity and regularity is wisely avoided.

Before entering the house we will examine the garden front. It is very similar to the entrance front. We see the mullioned windows, the two bow-windows and the two small circular ones on each side of the porch, which stands exactly opposite to the other entrance. Before this porch, enclosed by the wings, is the garden court, which is paved with rough flags, not closely placed together, but with interstices in which rock plants are cultivated. The surface of the court is diversified by footpaths of large red quarries. A spacious lawn stretches in front, girt by tall trees and woodland.



The second floor, called the first floor in England, has a supply of baths that would do credit to an American home



It is interesting to note what a wealth of outside light is given the rooms by this form of plan



A cream color is used upon walls and woodwork in the drawing-room, giving a splendid setting for the mahogany furniture

The stables form part of the plan of the house. They are not relegated to a corner and hidden away behind walls and trees as though they were buildings to be ashamed of, as in the case of old-fashioned houses. Believing that stables and outhouses can be made beautiful and deserve as careful architectural treatment as the house itself, the architect has made them fit into the general scheme.

Inside, the house is not a large one. The hall with its fireplace is 26 x 18 ft., occupying the depth of the house, so that you will see the width of the body of the house is only eighteen feet. This hall is a very comfortable room to sit and lounge in. On the left is the staircase. On the right in the wing is the drawing-room, library and billiard-room. The drawing-room is 22 x 16 ft; the billiard-room, 24 x 18 ft. The dining-room in the other wing is exactly the same size as the drawing-room and with it are grouped the servants' quarters, kitchen, scullery, servants' hall, pantry, store-rooms, etc. In the upper floor there are five bedroms and two bathrooms for the family and guests, and four bedrooms and bathroom in the servants' department. The decorative scheme is cream color, which gives a still greater impression of roominess. There is no cramped feeling about the house, for it was considered much better to have it restful and attractive than to leave narrow passages, stuffy rooms and more of them than would be really necessary.

Old and New Vegetables That Have Made Good

A GUIDE FOR THE PUZZLED AMATEUR WHO IS ABOUT TO MAKE UP HIS PLANTING LIST—VARIETIES THAT MAY BE PUT IN THE TRIED-AND-TRUE CLASS



Of the squashes there are no better sorts than this little Delicata and the Fordhook

BY F. F. ROCKWELL

Photographs by Nathan R. Graves

TO the man or woman planning a garden for the first time there is no one thing more confusing than the selection of the best varieties. This, in spite of the fact that catalogues should be, and might be, a great help instead of almost an actual hindrance.

I suppose that seedsmen consider extravagance in catalogues, both in material and language, necessary, or they would not go to the limit in expense for printing and mailing, as they do. But from the point of view of the gardener, and especially of the beginner, it is to be regretted that we cannot have the plain unvarnished truth about varieties, for surely the good ones are good enough to use up all the legitimate adjectives upon which seedsmen would care to pay postage. But such is not the case. Every season sees the introduction of literally hundreds of new varieties—or, as is more often the case, old varieties under new names—which have actually no excuse for being unloaded upon the public except that they will give a larger profit to the seller. Of course, in a way, it is the fault of the public for paying the fancy prices asked—that is, that part of the public which does not know. Commercial planters and experienced gardeners stick to well known sorts. New varieties are tried, if at all, by the packet only—and then "on suspicion."

It is the purpose of this article to guide the gardener of limited experience in selecting varieties sure to give satisfaction. In practically every instance they have been grown by the author, but his recommendations are by no means based upon personal experience alone. Wherever introductions of recent years have proved to be actual improvements upon older varieties, they are given in preference to the old, which are, of course, naturally much better known.



Kentucky Wonder, tried-and-true bean, stringless until nearly mature

It is impossible for any person to pick out this, that or the other variety of a vegetable and label it unconditionally "the best." But the person who wants to save time in making out his seed list can depend upon the following to have been widely tested, and to have "made good."

ASPARAGUS. While there are enthusiastic claims put forth for several of the different varieties of asparagus as far as I have seen any authentic record of tests (Bulletin 173 N. J. Agr. Exp. Station), the prize goes to Palmetto, which gave 28 per cent. more than its nearest rival, Donald's Elmira. Big yield alone is frequently no recommendation of a vegetable to the home gardener, but in this instance it does make a big difference; first, because Palmetto is equal to any other asparagus in quality, and second, because the asparagus bed is producing only a few weeks during the gardening season, and where ground is limited, as in most home gardens, it is important to cut this waste space down as much as possible. This is for beds kept in good shape and highly fed. Bari's Mammoth will probably prove more satisfactory if the bed is apt to be more or less neglected, for the reason that under such circumstances it will make thicker stalks than the Palmetto.

BEANS (dwarf). Of the dwarf beans there are three general types: the early round-podded "string" beans, the stringless round-pods, and the usually more flattish "wax" beans. For first early, the old reliable Extra Early Red Valentine remains as good as any sort I have ever tried. In good strains of this variety, the pods have very slight strings, and they are very fleshy. It makes only a small bush and is fairly productive and of good quality. The care-taking planter, however, will put in only enough of these first early beans to last a week or ten days, as the later sorts are more prolific and of better quality. Burpee's Stringless Greenpod is a good second early. It is larger, finer, stringless even when mature, and of exceptionally handsome appearance. Improved Refugee is the most prolific of the greenpods, and the best of them for quality, but with slight strings. Of the "wax" type, Brittle Wax is the earliest, and also a tremendous yielder. The long-time favorite, Rust-proof Golden Wax, is another fine sort, and an especially strong healthy grower. The top-notch in quality among all bush beans is reached, perhaps, in Burpee's White Wax—the white referring not to the pods, which are of a light yellow, and flat—but to the beans, which are pure white in all stages of



Cos lettuce has more flavor than the old sorts. Paris White is good



Salsify, or the vegetable oyster. Mammoth Sandwich is the best variety



For the home garden, it is difficult to find any cabbage better than the Savoy

growth. It has one unusual and extremely valuable quality—the pods remain tender longer than those of any other sort.

Of the dwarf limas there is a new variety which is destined, I think, to become the leader of the half-dozen other good sorts to be had. That is the Burpee Improved. The name is rather misleading, as it is not an improved strain of the Dreer's or Kumerle bush lima, but a "mutation," now thoroughly fixed. The bushes are stronger-growing and much larger than those of the older types, reaching a height of nearly three feet, standing strongly erect; both pods and beans are much larger and it is a week earlier. Henderson's new Early Giant I have not yet tried, but from the description I should say it was the same type as the above. Of the pole limas, the new Giant-podded is the hardiest—an important point in limas, which are a little delicate in constitution anyway, especially in the seedling stage—and the biggest yielder of any I have grown and just as good in quality—and there's no vegetable much better than well-cooked limas. With me, also, it has proved as early as that old standard, Early Leviathan, but this may have been a chance occurrence. Ford's Mammoth is another excellent pole lima of large size. Of the other pole beans, the two that are still my favorites are Kentucky Wonder, or Old Homestead, and Goldern Cluster. The former has fat meaty green pods, entirely stringless until nearly mature, and of enormous length. I have measured many over eight and a half inches long—more than the width of the print on this page — and they are borne in great profusion. Golden Cluster is one of the handsomest beans I know. It is happily named, for the pods, of a beautiful rich golden yellow color, hang in generous clusters and great profusion. In quality it has no superior; it has always been a great favorite with my customers. One need never fear having too many of these, as the dried beans are pure white and splendid for winter use. Last season I tried a new pole been called Burger's Greenpod Stringless or White-seeded Kentucky Wonder (the dried seeds of the old sort being brown). It did well, but was in so dry a place that I could not tell if it was an improvement over the standard or not. It is claimed to be earlier.



Chard, or sea-kale, may be gathered from midsummer until frost



The list of radishes is long and varied, both in shape and in color

Beets. In beets varieties are almost endless, but I confess that I have found no visible difference in many cases. Edmund's Early and Early Model are good for first crops. The Egyptian strains, though largely used for market, have never been as good in quality with me. For the main crop, I like Crimson Globe. In time it is a second early, of remarkably good form, smooth skin and fine quality and color.



Kohlrabi deserves to be better known. Gather when young and tender—an inch and a half in diameter, at the most

Broccoli. This vegetable is a poorer cousin of the cauliflower (which, by the way, has been termed "only a cabbage with a college education"). It is of little use where cauliflowers can be grown, but serves as a substitute in northern sections, as it is more hardy than that vegetable. Early White French is the standard sort.

Brussels Sprouts. This vegetable, in my opin-



Crisp-as-ice radishes. Work a little land plaster into the soil

ion, is altogether too little grown. It is as easy to grow as fall and winter cabbage, and while the yield is less, the quality is so much superior that for the home garden it certainly should be a favorite. Today (Jan. 19th) we had for dinner "sprouts" from a few old plants that had been left in transplanting boxes in an open coldframe. These had been out all winter—with no protection — repeatedly freezing and thawing, and while, of course, small, they were better in quality than any cabbage you ever ate. Dalkeith is the best dwarf-growing sort. Danish Prize is a new sort, giving a much heavier yield than the older types. I have tried it only one year, but should say it will become the standard variety.

Cabbage. In cabbages, too, there is an endless mix-up of varieties. The Jersey Wakefield still remains the standard early. But it is at the best but a few days ahead of the flatheaded early sorts which stand much longer without breaking, so that for the home garden a very few heads will do. Glory of Enkhuisen is a new early sort that has become a great favorite. Early Summer and Succession are good to follow these, and Danish Ballhead is the best quality winter cabbage, and unsurpassed for keeping qualities. But for the home garden, the Savoy type is, to my mind, far and away the best. It is not in the same class with the ordinary sorts at all. Perfection Drumhead Savoy is the best variety. Of the red cabbages, Mammoth Rock is the standard.

Carrots. The carrots are more restricted as to number of varieties. Golden Ball is the earliest of them all, but also the smallest yielder. Early Scarlet Horn is the standard early, being a better yielder than the above. The Danvers Half-long is probably grown more than all other kinds together. It grows to a length of about six inches, a very attractive deep orange in color. Where the garden soil is not in excellent condition, and thoroughly fined and pulverized as it should be, the shorter-growing kinds, Oxheart and Chantenay, will give better satisfaction. If there is any choice in quality, I should award it to Chantenay.

Cauliflower. There is hardly a seed catalogue which does not contain its own special brand of the very best and earliest cauliflower ever introduced. These are for the most part selected strains of either the old favorite Henderson's Snowball, or the old Early Dwarf Erfurt. Snowball, and Burpee's Best Early, which resembles it, are the best varieties I have ever grown for spring or autumn. They are more likely to head, and of much finer quality than any of the large late sorts. Where climatic conditions are not favorable to growing cauliflower, and in dry sections, Dry-weather is the most certain to form heads.



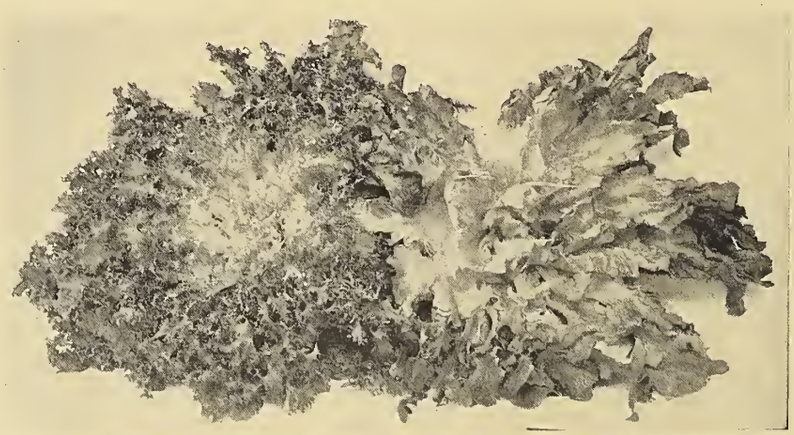
Leeks, first cousins to the onion. American Flag is the best variety

Celery. For the home garden the dwarf-growing, "self-blanching" varieties of celery are much to be preferred. White Plume and Golden Self-blanching are the best. The former is the earliest celery and of excellent quality, but not a good keeper. Recent introductions in celery have proved very real improvements. Perhaps the best of the newer sorts, for home use, is Winter Queen, as it is more readily handled than some of the standard market sorts. In quality it has no superior. When put away for winter properly, it will keep through April.



Vegetable Marrow, an excellent English member of the squash family

Corn. You will have to suit yourself about corn. I have not the temerity to name any best varieties—every seedsman has about half a dozen that are absolutely unequaled. For home use, I have cut out my list down to three: Golden Bantam, a dwarf-growing early of extraordinary hardiness—can be planted earlier than any other sort and, while the ears are small and with yellow kernels, it is exceptionally sweet and fine in flavor. This novelty of a few years since, has attained wide popular favor as quickly as any vegetable of which I know. Semour's Sweet Orange is a new variety, somewhat similar to Golden Bantam, but later and larger, of equally fine quality. White Evergreen, a perfected strain of Stowell's Evergreen, a standard favorite for years, is the third. It stays tender longer than any other sweet corn I have ever grown.



Of the endives, Broad-leaved Batavian is good; Giant Fringed is the largest

Cucumbers. Of cucumbers also there is a long and varied list of names. The

(*Continued on page* 179)

The Flower for the Million and for the Millionaire

WHY THE SWEET PEA DESERVES A FAR GREATER POPULARITY IN THIS COUNTRY—HOW TO GROW IT WITH THE BEST RESULTS—THE CHOICE BETWEEN PLANTING IN ROWS AND THE LESS COMMON ARRANGEMENT IN CLUMPS—THE ADVANTAGES OF POT-GROWN VINES

BY RUSSELL FISHER

Photograph by Nathan R. Graves

ST. PATRICK'S Day is the time to plant sweet peas in the latitude of New York—at least that is the rule that has come down from our ancestors. Practically, if sweet peas have not already been started under glass, as will be explained later, they should be put into the ground at the first moment that the ground is workable.

I wonder if many people realize what the sweet pea is in England. They sell about forty tons of seed for this annual every year over there. Everyone plants it, and almost everyone who plants it belongs to a sweet pea society. They not only plant sweet peas; they talk sweet peas. The matter of a slight variation in color or form is a subject for deep discussion among the thousands of enthusiasts. A recent list of English books on this flower alone contains seventeen titles. They really know sweet peas over there, and the reason they do lies undoubtedly in the merit of the flower itself. And yet the sweet pea is essentially an American flower by reason of the fact that practically the world's supply of its seed is produced by the California growers. They raise about one hundred and fifty tons a year in that section of the country.



One of the Spencer varieties of the sweet pea, with its characteristic waved standards

And in England they do not always plant sweet peas in a row—in this country we seem to think that that is the only way that it can be done. In fact, there are many English gardeners who insist that better results are obtained by growing sweet peas in clumps. The practical reason for this probably is that where they are thus grown the smaller space occupied is for that reason much more deeply worked and better fertilized. If the rows are actually given the same advantages and care, however, there is no reason why the results should be inferior.

One hears and reads much about the Spencer sweet pea or the Unwin or the Eckford, but it may not be generally known that there are in fact three great groups in the sweet pea family—the Grandiflora division, the Spencer type and the Unwin type. The original sweet pea was a bicolor flower, usually carrying two blooms on a stem. The standards were, as a rule, erect and flat, the wings smooth and the segments of the keel were invariably closed. That is the first group. This flower prevailed until the new variety, Countess Spencer, was exhibited, just about a decade ago. In it the rigid outline of the smooth standard was broken, so that the standards were waved, and the wings showed the same attractive characteristic. Structurally also there is a difference between the original flower of the first group and the Spencer types—the segments of the keel expand and the organs protrude.

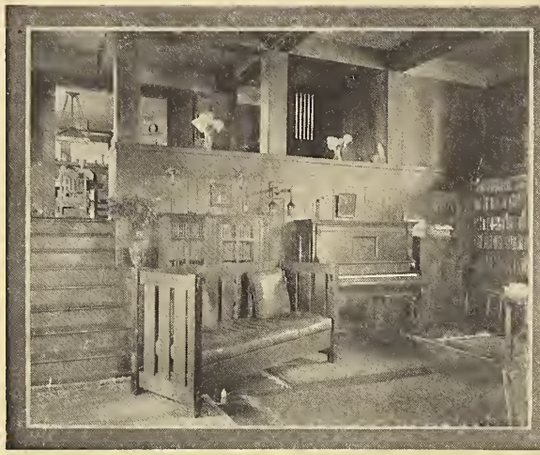
The third group is composed of the Unwin varieties, the first of which appeared simultaneously with Countess Spencer. The difference between it and the first or smooth-standard section is that the standard and wings are waved, but it differs from the Spencers in that the keel is quite closed, as in the first group.

The first group and the Unwin group are certain to remain true to type; the closed keel renders cross ventilization by natural agencies practically impossible. It would seem that, owing to this important difference in the Spencer varieties, they would not remain constant. Some of the varieties—Audrey Crier particularly—can never be expected to yield more than ten per cent. true to type. Many sorts, however, may be depended upon to give from ninety to one hundred per cent. true to type. The choice of what varieties to plant must be left to the reader; it is largely a matter of taste and color preference.

Here are the essentials in the matter of soil and its preparation in order that you may have the best results: The ground must be of such a character that in unusually wet weather the water will not remain in the top soil, causing the sweet pea roots to rot out. If the soil is not naturally drained there must be some provision for draining this moisture off. The vines must have sun and they should have air as well. Do not put them up against a wall that is baked by the midsummer sun. A little shade from the midday suns of June and July will be very beneficial. The fundamental requisite is deep soil—the roots of sweet peas will grow to a depth of three feet if you give them a chance, and the deeper they grow the less likelihood there is of their feeling the effect of a drought. The ground that is to support them should have been worked last fall, but if this was not done it should be worked as deeply as possible this spring—just as soon as the frost is out of the ground and the soil is comparatively dry. Add plant food in the spring only in the form of old, well decomposed manure, or bone meal, or superphosphate of lime. The latter is spread in a fairly heavy coating over the tops of the rows and forked or raked into the soil before planting.

Try the new scheme this spring of planting the seeds in pots. Do this at once—before March first, if possible—using three-and-a-half-inch or four-inch pots. Use for the potting soil a compost of turfy loam, leaf soil and a little sand. Plant four seeds to a pot and cover them with an inch of soil, labeling each

(*Continued on page* 192)



Inside the House

Timely Suggestions and Answers to Correspondents



The Editor will gladly answer queries pertaining to individual problems of interior decoration and furnishing. When an immediate reply is desired, please enclose a self-addressed stamped envelope.

Spring House Cleaning

IT ought to be the "good new days" when we think of the awful process called house cleaning that our grandmothers or even our mothers went through—we needs must pity them. Everything torn up from attic to cellar, nowhere to sit in peace, nowhere to rest one's head, the bureau drawers turned to the wall, the beds pulled into odd places, the floors bare and splintery and wet, and over all the smell of yellow soap. No wonder the poor family thought, if this be cleanliness, then give me dirt! For a frantic, forlorn week or two this went on, and then things settled down for another year. The worst thing about it all was that it was so often unnecessary, for the average house then, as now, was kept clean all the time. It was considered, however, almost immoral not to do it, for carping neighbors would call one "slack," and to be that was to be disgraced.

Nowadays it is quite a different story. Women understand that there is no need of the tyranny of house cleaning, but that one must keep up the fight year in and year out. With all the modern household inventions it is not such a hard task as it sounds. Don't let things accumulate, thinking that some day you will look them all over and get rid of them. Do it in the beginning; it means an easier life for you, and also the things are more useful to the person to whom they are given. If what goes by the general name of "trash" once gets the better of you, you are lost. People in the clutches of the trash habit will look at a little piece of cloth with hungry eyes, and carefully put it back in the piece trunk for fear it may be needed for an iron holder some time in the future. Economy and common sense are needed in every house, but not trash. It is also a good plan to eliminate the surplus bric-a-brac as well as the things useless or ugly. Banish them. It simplifies life and improves the appearance of the room.

Of course in the spring all winter things have to be carefully put away from the ravages of moths. If the hangings are very handsome and heavy, so that summer dust will spoil them, they should be packed away, and light summer ones should take their place.

There is nothing so unhomelike as bare and staring windows, and to see the gentle blowing of a thin muslin curtain on a hot day makes one feel cooler. Summer rugs may take the place of valuable oriental ones, and the whole house can be given a charming summer air with very little trouble. Velour hangings should be rolled with the nap, not folded. One room should be done at a time, so there will never be a feeling of having things upset, even if painting and papering is to be done. By planning the cleaning and re-decorating, matters can be so arranged that the person turned out of a room can use the guest room, and things will continue to go smoothly. A vacuum cleaner is one of the greatest helps in keeping a house clean that has ever been invented. It fairly eats up dust and dirt. There are many sizes of brushes and cleaners in the outfit, and they should be passed over walls and woodwork, the cracks in the floor, the books in the bookcases, the furniture, hangings, rugs, mattresses, pillows and cushions, all the out-of-the-way crooks and corners and last, but not least, one's own street clothes. It naturally will not take marks from paint, so that must be washed afterward, but there will be no dust to bother with. White paint should be washed with whiting, not soap. There are vacuum-cleaning companies in nearly all towns that will clean the entire house for one at a moderate cost, but a private cleaner of one's own is a far better plan. Two or three families could purchase one together and take turns in using it.

If one still likes the feeling of spring house cleaning so much that one cannot get through the year without it, have it done in the simplest way possible. First of all have the furnace and the furnace pipes and chimneys all cleaned, and any part of the cellar that would make dust go through the house. After that is done begin at the attic and work down to the cellar again. This simple method saves a deal of work as no rubbish is carried through the already cleaned parts of the house.



An attractive lighting fxture of dull brass or silver. Shades can be had to harmonize with the decorations

An Artistic Lighting Fixture

AN interesting and inexpensive electric light bracket is shown in the above illustration, the new feature involved being the "candle holder," or white cylinder with arms to support the shade.

The candle holder is made of one piece of metal, the lower portion being finished in dull brass, silver or other metal color, to correspond with the fixture, and the upper part (or candle) in white or cream enamel. The holder can be set over the socket of any fixture or chandelier, and does not require the use of tools or any fastening.

The shade shown is made of chintz, with gimp binding over wire frame, measuring about 5 inches in height, each shade requiring about one-sixth of a yard of material.

For bed-rooms, these "candle holders" and fabric shades make a delightful scheme, the character of the room being carried out completely by using the same material for the shades and draperies, or if the draperies are too dark, using material to blend with the wall.

A great many variatons of these shades can be worked out, for example, using Raja silk with bindings of galloon, and the lower edge can have in addition a finish of narrow gold lace. Such shades are quite handsome enough for libraries or halls.

One should be careful, however, in using dark materials, to line the shades with thin white muslin or china silk in order not to subdue the light too completely.

Beware the Rocking Chair

WHY retain the rocking-chairs in the living room? They are nerve destroyers, trippers up of the unwary and spoilers of tempers. One of the famous New England hostesses of the last century kept a rocking-chair in her drawing room in which a new visitor was tactfully induced to sit. If she rocked she was never asked to the house again. This was extreme, perhaps, but we in our hearts agree with her, for a person swinging rapidly back and forth as she talks is, to say the least, a disconcerting sight, and to most of us a maddening one. We take morals for granted, but we insist upon manners. Rocking-chairs are rarely seen in any room but a bedroom, and the sooner they disappear entirely the better.

For the Radiator.

FROM Germany comes what is perhaps a distant cousin of the tiled stove so much in evidence over there. This new invention is a porcelain radiator cover which fits over it, hiding it completely. The greater part of the front and sides is panelled in openwork, forming a conventionalized design, while between these panels are colored flower decorations. A band of polished brass runs around the base and a small brass door at either side permits regulation of the heater. As porcelain is a good conductor the device facilitates heat distribution. It is in good keeping in rooms where there is white woodwork, and the flower figures can be had in any color or pattern to harmonize with the wall decoration. The cover is especially valuable as an adjunct to the bathroom.

A Convenient Bungalow Bathroom

ONE of the most satisfactory features of our bungalow bathroom is the boiler. The range, to which it belongs, is directly behind it on the kitchen side of the wall. This unusual arrangement was planned to provide heat in the bathroom, where we had none, and to get rid of it in the kitchen, where we had too much. The boiler heat provides warmth eight months in the year, and the remaining four months, when the heat would cause discomfort, we use oil stoves in the kitchen. The space in the kitchen happened to be badly needed, while in the bathroom the corner could very well be spared. The boiler, so located, is often a help in drying small articles of clothing that would only be a bother around the kitchen range. On cold days in winter a small oil stove is used in addition.

Next to the boiler is a medicine closet that practically occupies no space at all, for the closet upon which it backs can easily spare the little room required for four shelves one foot wide and three feet long. In fact it adds to the convenience of the other closet, as the boards that enclose the back and top of the medicine shelves provide a place for clothes hooks and a shelf on the other side.

Space is still further economized by placing a nickel towel rod upon the closet door, and the enameled iron basin directly below it. Wall space is also saved by a half dozen nickel hooks on the inside of the bathroom door; these, with a small "hat tree," give all the accommodations required for the temporary disposal of clothing. Light was admitted, from the bathroom window to a dark passage, by removing the uppermost of the five horizontal panels in the door and replacing it with a pane of glass. A thin curtain made the door more ornamental, without interfering with the light.

Hanging shelves hold candle, matches and other small conveniences. A clock enables the dresser to keep his eye on train time. A dressing-table was made by sawing off a third of a round-topped table, to make it occupy less space and to sit square against the wall. A dummy tea chest, such as is used for exhibition in a grocery window, painted, is used either as a seat, when dressing, or as a foot stool, to reach articles on the upper shelf of the medicine closet.

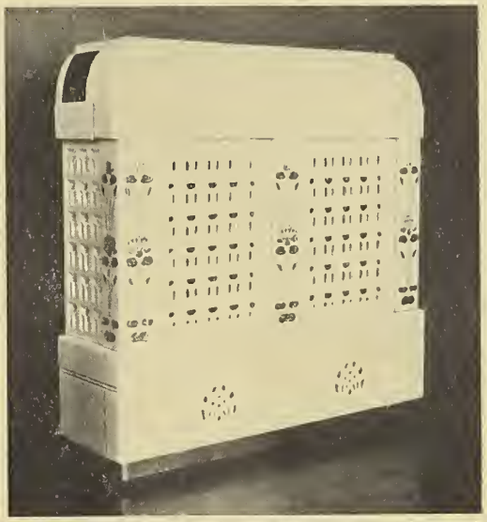
The high window, placed above the bathtub, is twenty inches square and swings inward. A netting screen is kept in this window the year round; this with the extra broad sill provides a good place for drying brushes and sponges. The curtain is arranged with a view to screening and lighting at the same time. A full, straight curtain, gathered top and bottom on two pieces of picture wire, extends only three-quarters of the window space, leaving a four-inch strip of uncurtained glass at the top to admit more light. The space just below the window is utilized for a nickel towel rod.

The bathtub is enameled iron with a roll rim and the wall around it is protected from spattering by a strip of bordered shelf oilcloth. Wall space, over the head of the tub, otherwise useless, holds a wide towel rod for the bath mat. Besides the usual plumbing and piping, this little six by seven room contains, also, a half dozen other bathroom necessities, such as laundry basket and mirror. Both wall and floor space had to be well planned to accommodate all without inconvenience.

A coat of aluminum paint greatly improved the appearance of the boiler, the pipes (except the nickel ones) and the outside of the bathtub. The walls are painted. The woodwork and floor are finished as in all the other rooms, cypress, waxed and varnished, for the former, and North Carolina pine, oiled, for the latter. Inlaid linoleum, cut into mats, makes a most durable and satisfactory protection for the floor.

Although off the line of sewers and water supply, the plumbing is very conveniently arranged by means of a cistern and cesspool. The kitchen pump fills a tank in the attic with very little effort, as there is only one flight to lift the water in this one-story bungalow.

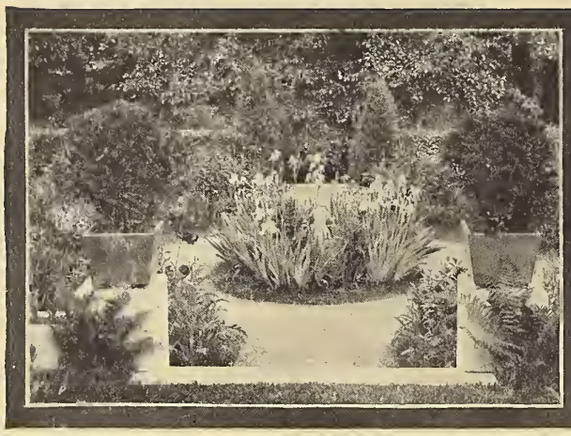
The place is protected in winter by a bank of earth around the foundation. This, made ornamental with rubble work, adds to the appearance of the house.



A suggestion for that radiator problem—A cover of porcelain. The flower panels come in a variety of colors and designs



A bungalow bathroom where space is at a premium. The boiler provides the heat necessary on cold mornings and leaves more room in the kitchen



Garden Suggestions and Queries



Conducted by
F. F. Rockwell

The Editor will be glad to answer subscribers' queries pertaining to individual problems connected with the garden and grounds. When a direct personal reply is desired please enclose a self-addressed stamped envelope.

MARCH gets here before we are expecting it, and usually is gone before we have done half the things we had planned to do—and should have done. And then they never do get finished—for April is so crowded with work that will not wait, that there's no chance to go back. We must wait until the seasons come round again, and lose a year.

Preparing for Planting

AS far north as New York, March always finds the "early" patches of ground, the well-subdrained, sandy soils on slopes, ready to be broken up for the spring sowing or planting. Nothing is to be gained by waiting, everything by having it done the first possible day, especially if you have to hire men to do your ploughing or spading. And by the way, if there is room for a horse to turn around in it, have your garden plowed, not dug. Care must be taken not to attempt to work the ground too soon, as it may be injured for years, especially if at all clayey in composition. It is not enough that the frost is out of the ground—the soil must have dried out sufficiently to crumble apart, instead of packing in solid, pasty furrows from the mould-board of the plow. This condition is usually preceded by the soils cracking or opening up into numerous little fissures, a few inches deep, especially if it has had no winter cover crop—such as rye—growing upon it.

Unless the soil is dry enough not to clog and be lumpy, it can be "fitted" for sowing immediately after plowing; if not, it will be well to let it lie for a day or two until the surface dries out a little. A great many of the failures in garden work are caused by not having the ground thoroughly prepared for sowing or planting. It is such a temptation to get the seed into the ground just the moment it is smooth enough to walk on that we hate to spare half a day, or even a few hours, in putting on the seemingly unnecessary finishing touches to the garden bed. But to yield to this temptation is only to furnish another illustration of "haste makes waste;" for not only will the growth made by seeds sown in soil perfectly prepared be much greater at first, but proportionately more at the end of the season.

Let us then take every pains to have the plot devoted to the vegetable garden "fined" perfectly before we begin planting. If the garden is of considerable size, it will be best not to plow it all at once, for in a dry season a freshly prepared seed-bed is of great importance. Where it is not practicable to make more than one job of the plowing, the same result can to some extent be achieved by working up only a part of it at a time—just as much as will be needed for immediate use. A good harrow—the best kind for the purpose will be determined by the sort and condition of the soil—should follow the plow. The piece should be gone over until all lumps are broken up fine, and the earth pulverized to a depth of several inches below the surface. Do not let the harrow stop until the result is obtained, even if it means going over the piece a dozen times. The ground will then be ready for the hand iron-rake, used to level and smooth off the soil, and remove stones, etc. Care must be exercised not to dig up trash or manure, or you can rake all day without getting a smooth bed.



When the seedlings first appear they seem almost human and their growth and development is intensely interesting

Fertilizer

THE question of manures and fertilizers is another most important one, but we cannot take it up in much detail in this limited space. If you are buying barnyard manure, see to it that it be neither "fire-fanged" or water-soaked. The former condition is shown by the interior of the heap being, usually, of a light gray color, and very light, dry and fluffy in appearance, almost like a heap of ashes; the latter, so saturated with water as to be dripping wet, and although rich in appearance, usually leached and so full of surplus and useless weight as to be unprofitable to handle. The best manure for general purposes is that of horses and cattle mixed, and if pigs have run upon it, better still. It should be dark in color, dry and so thoroughly rotted as to crumble easily into small fragments.

Brands of fertilizer are legion. As a rule, the higher the price per bag, the cheaper the actual available plant food. If you are going to use any quantity, by all means mix your own. Public demand is now beginning to force dealers to carry the raw chemicals from which they are made—nitrate of soda, muriate and sulphate of potash, acid phosphate, and ground bone being the principal ingredients. These come finely pulverized, and may be readily mixed with a shovel and then screened to make the compound uniform. Write your State Experiment Station for further information about "home-mixing." For most garden crops, manure is spread upon the land before plowing—from two to three inches gives best results. Fertilizers are sown broadcast after plowing, and harrowed in.

All the above is mentioned that you may be ready to grasp the first opportun-

ity to begin the garden work. But in planning for that, do not neglect the things that are pressing now—the preparations under cover. All the first batches of seedlings, cabbage, cauliflower, beets, etc., put in last month, will be requiring transplanting the first part of this month. They will be ready for the shift shortly after the second or true leaves are found, and before they begin to crowd or grow lanky and droop. Unless you expect to transplant them directly into the soil in coldframes or hotbeds, used "flats" such as described for the sowing of seed, only a little deeper—say about four inches. The bottoms should not be water-tight, but drainage will not be so much needed as in the seed-flats. Such a flat will hold from 35 to 104 seedlings, according to the space given. The fewer the number, the better plants they will make. Fill these boxes about one-third full of well rotted manure, such as described above, and then level off to the top with good loam, which should be put through a quarter-inch or half-inch sieve if at all lumpy or soddy. Do not have this soil too fine, or it will pack and exclude the air which is just as necessary to healthy growth of the little plants as water is. Now take out the little plants and separate them carefully. Don't attempt to pull them from the soil, but lift out a little lump at a time, soil and all, and pull them apart. Make a hole with the forefinger of one hand, and holding the seedling between the thumb and forefinger of the other, lower half its length into the soil. Then with the tips of both thumbs and forefingers firm it into position. The little newly set plants should stand up stiff and stocky. A rap with the palm of the hand on the side of the box will shake down the little mountains about the stems into the valleys. Then water thoroughly, and set where they may be shaded for from two to four days. As soon as the soil begins to dry out, give a second thorough watering, but do not let the soil become muddy at any time. *On bright days always try to water them early in the morning, so that the stems and leaves may be dried off by night.* This may save you the loss of hundreds of plants from the dreaded "damping off," or rotting of the tiny stems.

As the days get longer and the sun higher, the matter of watering and especially of airing must become a daily one, for upon the care and regularity with which the newly transplanted flats are looked after will depend entirely the quality of the plants that go into your garden, and of the vegetables that come out of it.

Don't be afraid to give them air.

Don't coddle your plants in a tight frame or wait to give them ventilation until the atmosphere inside is too hot. Such treatment is weakening and makes the little plants unable to resist the severe temeprature changes of the garden. Seedlings are much like young children; they require close attention, especially in the early stages of their career.

How I Made My Poplar Hedge

A NEIGHBOR of mine has a very handsome Poplar hedge that makes a perfect screen of green at the back of his house, and last spring when trimming it he advised me to take some of the pieces he cut off and put them into the ground to root. With many misgivings I gathered about seventy-five large and small pieces, and put them in the ground covering all but a little from the tops. By fall I had forgotten all about them until my neighbor inquired about them. Expecting



A well-grown poplar hedge started from random cuttings. Leave but a little above ground and in six months roots as vigorous as those shown above will have appeared

to find nothing but dried-up sticks we went to inspect and what was my surprise to find that fully fifty of the seventy-five were beautifully rooted. Some of them had roots at every joint from the bottom to the top. My only regret now is that I did not make this attempt before.

Mrs. Arthur Duffy

The Grounds

ABOUT the grounds there is not much to do in the first part of March, except such work as may have been left over from last month. As soon as the ground has thawed and dried out a little, the lawns should be gone over carefully with an iron rake, before the new growth of grass shoots up, and if possible a light mulch of finely pulverized rotten manure, so old as to have no disagreeable odor, applied. The first few rains will wash it almost entirely away, and the grass be greatly benefited. In lieu of this, chemical lawn-dressing, or any good fertilizer may be applied—better in several very light applications a week or ten days apart than in one heavy one. A well kept, smooth green lawn is one of the most beautiful features a place can have—and one not often seen.

As soon as the ground loses it surplus of moisture roll it well with a heavy lawn roller. Frequently the top soil has been heaved up by the frost so that the grass roots are pulled away from the earth underneath and consequently they are liable to die out very quickly. Roll the lawn back and forth in one direction and then again at right angles.

"Hardening Off"

ALL your early plants should be so well hardened as to be capable of withstanding a severe freeze.

For a week before you are ready to set them out, begin to harden them off, by leaving them exposed to all but severe freezing weather. If you should get caught by a sudden freeze, and go out some morning to find your cabbage and lettuce brittle as plants made of glass, don't either give them up for lost, or take out a can of warm water to thaw them out. In the first place, keep them shaded from the sun; in the second, water copiously with the coldest water to be had. With this treatment they will come safely out of a pretty severe freeze.

If you are crowded for room, take out of your frames the boxes of earliest and hardiest plants and set them on the south side of the frames or of a sheltering building, with a board set up endwise outside of them and a few supports or old sash frames over them. On freezing nights they can be covered with old bags or rugs, and will withstand a low temperature.

In the Flower Garden

OF course, all the foregoing applies to the flower garden as well as to the vegetable patch; small pots, however, instead of boxes, will be required for many of the tenderer plants to get good specimens ready for the border. Remember that pots will dry out more readily than boxes, and must be watched more carefully, especially when they are of the small sizes.

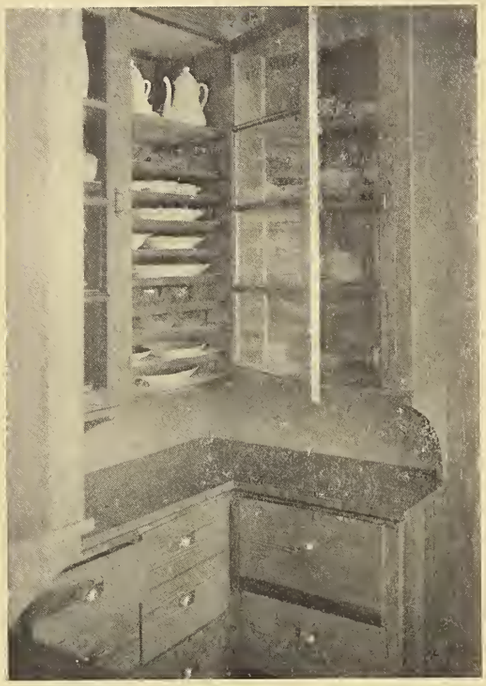
Have you ever tried tuberous-rooted begonias? They should be much better known, and if you had none last year try a few this Spring. The bulbs are very reasonable in price, especially if you will remember they last many years. You can start them easily yourself—even without frames, if you have none. Pot up, first in pots very little larger than the bulbs themselves, using a light, rich sandy compost. Give a thorough soaking, and then be careful never to let the little pots get dry enough to bake, as they will quickly in the sun. As soon as the roots have formed a network on the outside of the ball, shift to a size larger, and repeat as often as necessary, making the soil richer until it is about half old, thoroughly rotted manure. The plants will attain great size, easily filling five- and six-inch pots, and the profusion of color, and variety and beauty of bloom are wonderful. The plants do splendidly for bedding out.

Ingenious Devices

LABOR-SAVING SCHEMES AND SHORT CUTS IN THE HOUSE AND IN THE GARDEN

A Saver of Crockery

FREQUENTLY it is not more space that is required to increase the efficiency of a cupboard, but a more careful division of the space already possessed. In our accompanying illustration is shown a compartment in a butler's pantry recently built. It is devoted chiefly to platters. Instead of being piled on top of each other or set on end in the ordinary fashion, each platter has a shelf to itself. The shelves are no more than four inches apart and are adjustable. This simple arrangement not only saves much space but prevents breakage, as dishes cannot be slammed together by a careless maid. A similar device could easily be introduced into any cupboard, using the metal supports sold for bookcase shelves.



The difficult arrangement of platters in the china closet is made a simple matter by increasing the number of shelves

L. A. S.

For Better Ventilation

AN ingenious scheme for the better ventilation of a room with a transomless door was recently shown me in the house of a well-known actor who is also a good amateur carpenter. The room, which is small and rather low-ceiled, has two windows, in the north and east sides respectively, and one door, divided into sections of five crosswise panels. Seeing the need for the better circulation of air in the room, which is often used as a sleeping apartment, the actor put his wits and his tools to work and sawed out the whole of the top panel. At the bottom of the panel he put hinges and at the top a brass catch, with brass chains at the sides that allow it to be let down for possibly ten inches. The brass work is unobtrusive, and is by no means disfiguring to the door, which is painted white, and the movable panel does quite as good service as a real transom.

S. L. C.

Lighting Helps

THE frequent blackening which occurs on gas mantles of the Welsbach type can oftentimes be corrected by the use of common table salt. Turn the light low and sprinkle lightly from a salt-shaker. Then let the light burn brightly for a few minutes and much of the black will have disappeared. Repeat this process until the surface is entirely clear. If the brass of the burner is visible clean off all salt grains, as they have a corrosive action and are apt to stain. This simple remedy can make a considerable saving in mantles.

Rust in the Gas Stove

TO prevent the rusting of the gas stove oven, form the habit of leaving the doors wide open while the oven is cooling off after using. If left closed the steam generated by the process of cooling dampens the iron and rust is the result. Strict observance of this rule rule will double the life of the gas stove.

M. E. S. H.

"Stoa Poikile"

A FAMILY desiring additional porch space without the consequent darkening of the lower windows, conceived the ingenious idea of having a separate porch building constructed. The "Stoa Poikile," as they choose to call it, is of architecture corresponding to the main house and forms an attractive adjunct to the grounds. It has the advantage of receiving every breeze and providing shade during all the day. The central partition makes it possible to be used either for shade or as a sun parlor, for when one side is in shadow the other has sunlight.



A novel form of porch that retains all the desirable qualities of the veranda without darkening rooms or spoiling the symmetry of the house. Mellor & Meigs, architects.

An Efficient Seed Test

TO plant and wait long and hopefully for some result of your labors only to find that a large majority of your seeds are sterile and unproductive is a real disappointment. If one could only have known beforehand and planted again to retrive the loss. It is very easy, however, to test your own seeds and insure your results.

Take at random fifty to one hundred seeds from the package; get some soft canton flannel and a good size soup or dinner plate. This is all the apparatus necessary. Moisten the flannel and place the seeds upon it, then cover with another plate of similar size to retain the moisture. Subject to a temperature of from 70 to 85 degrees and watch the process of germination each day for about eight days. Continue to keep moist as soon as any signs of dryness appear. When your test is completed, count the seeds that have sprouted and find the average of fertile seeds; it is then an easy matter to make allowance for the percentage of poor material.



Anyone can test his seeds before planting by germinating them between layers of flannel, kept moist in a soup plate.



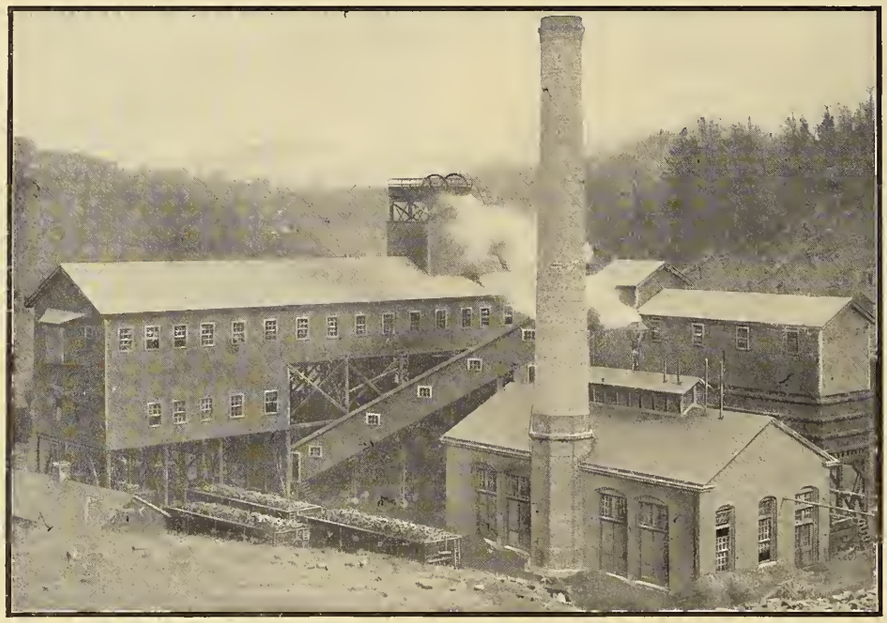
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"The Roof that Outlives the Building"

MAINTENANCE economy is the watchword with industrial concerns these days. High upkeep charges on a building cut into dividends.

How much repairs and painting any old time roofing will add to the year's expenses depends on the size of your building.

Asbestos "Century" Shingles are indestructible. Officials keen on getting facts will tell you that these Shingles need *no repairs—no painting.* Their first cost is the only cost—and you pay no more for Asbestos "Century" Shingles than you expect to pay for a *first class* roof.

In every industrial centre in the world you will find industrial buildings of all types roofed with Asbestos "Century" Shingles.

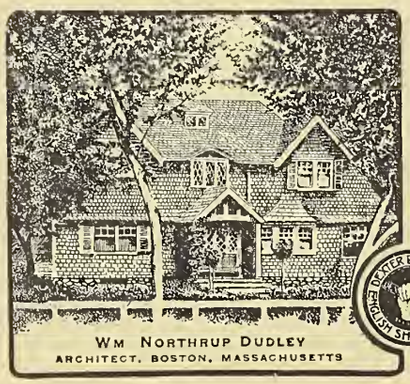
They are the *first practical lightweight roofing of reinforced concrete.* Weatherproof—fireproof—timeproof. Cannot split, blister, crack, rot or rust.

You can get Asbestos "Century" Shingles in three colors—Newport Gray (silver gray), Slate (blue black), and Indian Red—in numerous shapes and sizes. Ask your responsible Roofer about Asbestos "Century" Shingles. Write for our illustrated Booklet C, "Roof Economy," full of valuable pointers for the man with an industrial building to be roofed.

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Factors

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Wm Northrup Dudley
Architect, Boston, Massachusetts

Paint spoils the natural surface—costs twice as much.

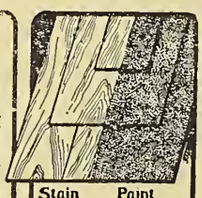
Dexter Brothers' English Shingle Stains

preserve and waterproof the wood. They are made of finest English ground colors, mixed in linseed and special preserving oils which double the life of the shingles. Write for stained miniature shingles. Examine them carefully. Match them against the natural setting of your house until the right color combination is found. With them we shall send booklet, which tells about our stains, and shows letters from owners and architects.

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Stain Paint

Stain brings out the grain, gives a soft, velvety appearance.

Paint hides the grain, spoils the natural surface of the wood.

The Small Model as an Aid in Building a Home.

(*Continued from page* 156)

far exceeded the original idea, as it gave thickness and texture to the roof. Here and there one or two tiles are vari-colored. in order to do away with the stereotyped effect of an even roof.

Another point encountered was that when the first models were made and set up with their transparent windows, there was a misleading effect, due to the fact that one could look through the building and see the back of the cardboard, as well as the interior construction of the framework. This was overcome by painting the entire interior of the model black, before setting it in position. This successfully concealed the real interior or construction of the house. For giving texture to the models, fine sandpaper in a great many cases was used to indicate pebble-dash walls. It was used in the natural state or given a slight wash over the entire sheet before windows were cut out. Where a rough-cast wall was desired, thick bookboard was used with a rough surface of the required color.

These models, complete, measure 45 x 25 in., and weigh about twelve pounds each.

Grow Your Own Fruit.

(*Continued from page* 163)

matter, will be given in the concluding article of this series next month.

SETTING

Standard apple trees, fully grown, will require thirty to forty-five feet of space between them each way. It takes, however, ten or twelve years after the trees are set before all of this space is needed. A system of "fillers," or inter-planting, has come into use as a result of this, which will give at least one hundred per cent. more fruit for the first ten years. Small-growing standards, standard varieties on dwarf stock, and also peaches, are used for this purpose in commercial orchards. But the principle may be applied with equally good results to the home orchard, or even to the planting of a few scattered trees. The standard dwarfs give good satisfaction as "permanent fillers." Where space is very limited, or the fruit must go into the garden, they may be used in place of the standard sorts altogether. The dwarf trees are, as a rule, not so long-lived as the standards, and to do their best, need more care in fertilizing and manuring; but the fruit is just as good, just as much, or more, can be grown on the same area, and the trees come into bearing two to three years sooner. They cost less to begin with and are also easier to care for, in spraying and pruning and in picking the fruit.

CULTIVATION

The home orchard, to give the very finest quality of fruit, must be given careful and thorough cultivation. In the case of scattered trees, where it is not practi-

cable to use a horse, this can be given by working a space four to six feet wide about each tree. Every spring the soil should be loosened up, with the cultivator or fork, as the case may be, and kept stirred during the early part of the summer. Unless the soil is rich, a fertilizer, high in potash and not too high in nitrogen, should be given in the spring. Manure and phosphate rock, as suggested above, is as good as any. In case the foliage is not a deep healthy green, apply a few handfuls of nitrate of soda, working it into the soil just before a rain, around each tree.

About August first the cultivation should be discontinued, and some "cover crop" sown. Buckwheat and crimson clover is a good combination; as the former makes a rapid growth it will form, if rolled down just as the apples are ripening, a soft cushion upon which the wind-falls may drop without injury, and will furnish enough protection to the crimson clover to carry it through most winters, even in cold climates.

In addition to the "filler crops," where the ground is to be cultivated by horse, potatoes may be grown between the rows of trees; or fine hills of melons or squash may be grown around scattered trees, thus, incidentally, saving a great deal of space in the vegetable garden. Or why not grow a few extra fancy strawberries in the well cultivated spots about these trees? Neither they nor the trees want the ground too rich, especially in nitrogen, and conditions suiting the one would be just right for the others.

It may seem to the beginner that fruit-growing, with all these things to keep in mind, is a difficult task. But it is not. I think I am perfectly safe in saying that the rewards from nothing else he can plant and care for are as certain, and surely none are more satisfactory. If you cannot persuade yourself to try fruit on any larger plan, at least order half a dozen dwarf trees (they will cost about twenty cents apiece, and can be had by mail).

Order your trees now, and get them in the first thing this spring, as soon as the soil is dry enough to work properly. It will prove about the best paying investment you ever made.

Old and New Vegetable Varieties That Have Made Good.

(*Continued from page* 170)

old Extra Early White Spine is still the best early—for the main crop, some "perfected" form of White Spine. I myself like the Fordhood Famous, as it is the healthiest strain I ever grew, and has very large fruit that stays green, while being of fine quality. In the last few years the Davis Perfect has won great popularity, and deservedly so. Many seedsmen predict that this is destined to become the leading standard—and where seedsmen agree let us prick up our ears! It has done very well with me, the fruit being the handsomest of any I have grown. If

Madam—

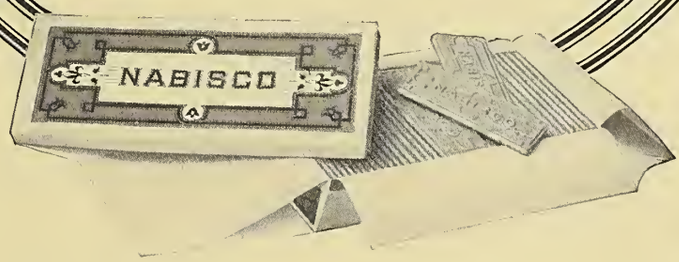
No matter what you have decided to serve for luncheon or dinner, do not fail to add Nabisco Sugar Wafers for dessert.

These dessert confections are so tempting and inviting that they not only make a good meal better, but ofttimes save a poor one.

Always fresh and delightful in flavor.

In ten-cent tins
Also in twenty-five cent tins

CHOCOLATE TOKENS—similar to NABISCO, but with a delicious outer shell of rich chocolate.



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THE CORCORAN TANK TOWERS

supply a force of water under pressure that would be immediately effective in case of fire in any of your buildings. Instant control of all water facilities is made certain. They are of the best material and workmanship and built to harmonize with their surroundings.

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The Corcoran Tank Towers are of cypress or cedar. Either wood is proof against heat or cold and will not rot, thus the cost of up-keep is practically nothing.

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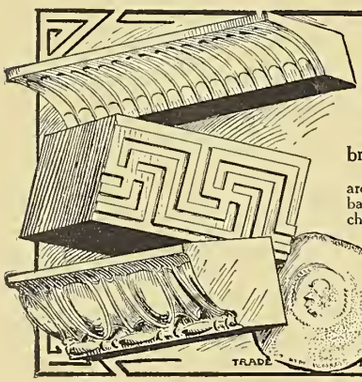
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it proves as strong a grower it will replace Fordhood Famous with me.

EGG-PLANT. New York Improved Purple is still the standard, but it has been to a large extent replaced by Black Beauty, which has the merit of being ten days earlier and a more handsome fruit. When once tried it will very likely be the only sort grown.

ENDIVE. This is a substitute for lettuce for which I personally have never cared. It is largely used commercially. Broad-leaved Batavian is a good variety. Giant Fringed is the largest.

KALE. Kale is a foreigner which has never been very popular in this country. Dwarf Scott Curled is the tenderest and most delicate (or least coarse) in flavor.

KOHLRABI. This peculiar mongrel should be better known. It looks as though a turnip had started to climb into the cabbage class and got stuck. When gathered young, not more than an inch and a half in diameter at the most, they are quite nice and tender. They are of the easiest cultivation. White Vienna is the best.

LEEK. For those who like this sort of thing it is—just the sort of thing they like. American Flag is the best variety, but why it was given the first part of that name, I don't know.

LETTUCE. To cover the lettuces thoroughly would take an article by itself. For lack of space I shall have to mention only a few varieties, although there are many others as good and suited to different purposes. For quality, I put Mignonette at the top of the list, but it makes very small heads. Grand Rapids is the best loose-head sort—fine for under glass, in frames and early outdoors. Last fall from a bench 40 x 4 ft., I sold $36 worth in one crop, besides some used at home. I could not sell winter head lettuce to customers who had once had this sort, so good was its quality. May King and Big Boston are the best outdoor spring and early summer sorts. New York and Deacon are the best solid cabbage-head types for resisting summer heat, and long standing. Of the "Cos" type (see illustration on page 168) Paris White is good.

MUSKMELON. The varieties of muskmelon are also without limit. I mention but two—which have given good satisfaction out of a large number tried, in my own experience. Netted Gem (known as "Rocky Ford") for a green-fleshed type, and Emerald Gem for salmon-fleshed. There are a number of newer varieties, such as Hoodoo, Miller's Cream, Montreal, Nutmeg and others, all of excellent quality.

WATERMELON. With me (in Connecticut) the seasons are a little short for this fruit. Cole's Early and Sweetheart have made the best showing. Halbert Honey is the best for quality.

OKRA. In cool sections the Perfected Perkins does best, but it is not quite so good in quality as the southern favorite, White Velvet. The flowers and plants of this vegetable are very ornamental.

Onion. For some unknown reason, different seedsmen call the same onion by the same name. I have never found any explanation of this, except that a good many onions given different names in the catalogues are really the same thing. At least they grade into each other more than other vegetables. With me Prize-taker is the only sort now grown in quantity, as I have found it to outyield all other yellows, and to be a good keeper. It is a little milder in quality than the American yellows—Danvers and Southport Globes. When started under glass and transplanted out in April, it attains the size and the quality of the large Spanish onions of which it is a descendent. Weathersfield Red is the standard flat red, but not quite so good in quality or for keeping as Southport Red Globe. Of the white, I like best Mammoth Silver-skin. It is ready early and the finest in quality, to my taste, of all the onions, but not a good keeper. Aisla Craig, a new English sort now listed in several American catalogues, is the best to grow for extra fancy onions, especially for exhibiting; it should be started in February or March under glass.

Parsley. Emerald is a large-growing, beautifully colored and mild-flavored sort.

Parsnip. This vegetable is especially valuable because it may be had at perfection when other vegetables are scarce. Hollow Crown ("Improved," of course!) is the best.

Peas. Peas are worse than corn. You will find enough exclamation points in the pea sections of catalogues to train the vines on. If you want to escape brain-fag and still have as good as the best, if not better, plant Gradus (or Prosperity) for early and second early; and Boston Unrivaled (an improved form of Telephone) for main crop, and Gradus for autumn. These two peas are good yielders, free growers and of really wonderfully fine quality. They need bushing, but I have never found a variety of decent quality that does not.

Pepper. Ruby King is the standard, large, red, mild pepper, and as good as any. Chinese Giant is a newer sort, larger but later. The flesh is extremely thick and mild. On account of this quality, it will have a wider range of use than the older sorts.

Pumpkins. The old Large Cheese, and the newer Quaker Pie, are as prolific, hardy and fine in quality and sweetness as any.

Potato. Bonce is a good early garden sort, but without the best of culture is very small. Irish Cobbler is a good early white. Green Mountain is a universal favorite for main crop in the East—a sure yielder and heavy-crop potato of excellent quality. Uncle Sam is the best quality potato I ever grew. Baked, they taste almost as rich as chestnuts.

Radish. I do not care to say much about radishes; I don't like them. They are, however, universal favorites. They come round, half-long, long and tapering; white, red, white-tipped, crimson, rose, yellow-brown and black; and from the



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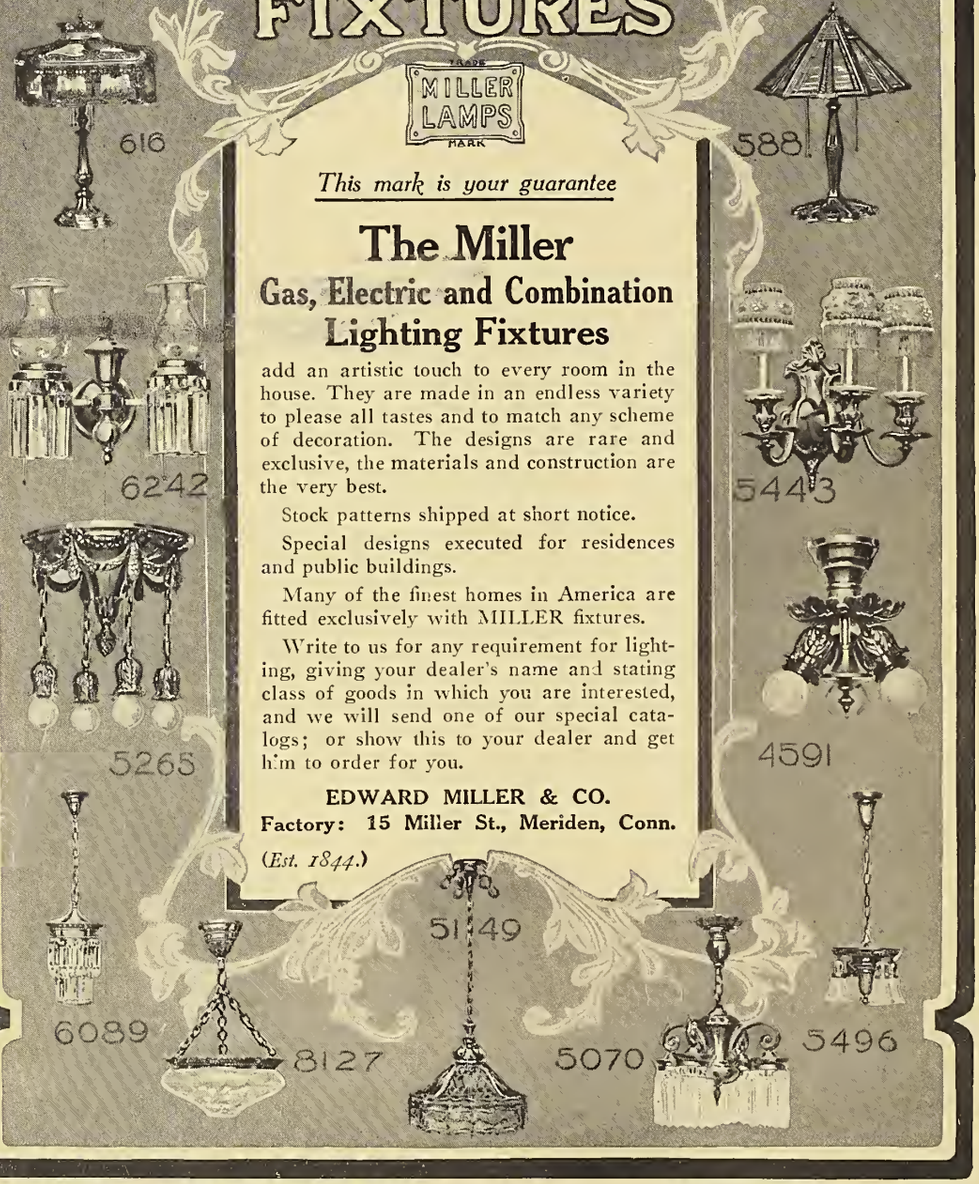
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size of a button to over a foot long by fifteen inches in circumference—the latter being the new Chinese or Celestial. So you can imagine what a revel of varieties the seedsmen may indulge in. I have tried many—and cut my own list down to two, Rapid-red (probably an improvement of the old standard, Scarlet Button), and Crimson Globe (or Giant), a big, rapid, healthy grower of good quality, and one that does not get "corky." A little land plaster, or gypsum, worked into the soil at time of planting, will add to both appearance and quality in radishes.

Spinach. The best variety of spinach is Swiss Chard Beet (see below). If you want the real sort, use Long Season, which will give you cuttings long after other sorts have run to seed. New Zealand will stand more heat than any other sort. Victoria is a newer variety, for which the claim of best quality is made. In my own trial I could not notice very much difference. It has, however, thicker and "savoyed" leaves.

Salsify. This is, to my taste, the most delicious of all root-vegetables. It will not do well in soil not deep and finely pulverized, but a row or two for home use can be had by digging and fining before sowing the seed. It's worth extra work. Mammoth Sandwich is the best variety.

Squash. Of this fine vegetable there are no better sorts for the home garden than the little Delicata, and Fordhook. Vegetable Marrow is a fine English sort that does well in almost all localities. The best of the newer large-vined sorts is The Delicious. It is of finer quality than the well known Hubbard. For earliest use, try a few plants of White or Yellow Bush Scalloped. They are not so good in quality as either Delicata or Fordhook, which are ready within a week or so later. The latter are also excellent keepers and can be had, by starting plants early and by careful storing, almost from June to June.

Tomato. If you have a really hated enemy, give him a dozen seed catalogues and ask him to select for you the best four tomatoes. But unless you want to become criminally involved, send his doctor around the next morning. A few years ago I tried over forty kinds. A good many have been introduced since, some of which I have tried. I am prepared to make the following statements: Earliana is the earliest quality tomato, for light warm soils, that I have ever grown; Chalk's Jewel, the earliest for heavier soils (Bonny Best Early resembles it); Matchless is a splendid main-crop sort; Ponderosa is the biggest and best quality—but it likes to split. There is one more sort, which I have tried one year only, so don't accept my opinion as conclusive. It is the result of a cross between Ponderosa and Dwarf Champion—one of the strongest growing sorts. It is called Dwarf Giant. The fruits are tremendous in size and in quality unsurpassed by any. The vine is very healthy strong and stocky. I believe this new tomato will become the standard main crop for the home garden.

By all means try it. And that is a good deal to say for a novelty in its second year!

TURNIP. The earliest turnip of good quality is the White Milan. There are several other of the white-fleshed sorts, but I have never found them equal in quality for table to the yellow sorts. Of these, Golden Ball (or Orange Jelly) is the best quality. Petrowski is a different and distinct sort of very early maturity and of especially fine quality. If you have room for but one sort in your home garden, plant this for early, and a month later for main crop.

Don't fail to try some of this year's novelties. Half the fun of gardening is in the experimenting. But when you are "testing out" the new things in comparison with the old, just take a few plants of the latter and give them the same extra care and attention. Be fair to the "standards"—and very often they will surprise you fully as much as the "novelties."

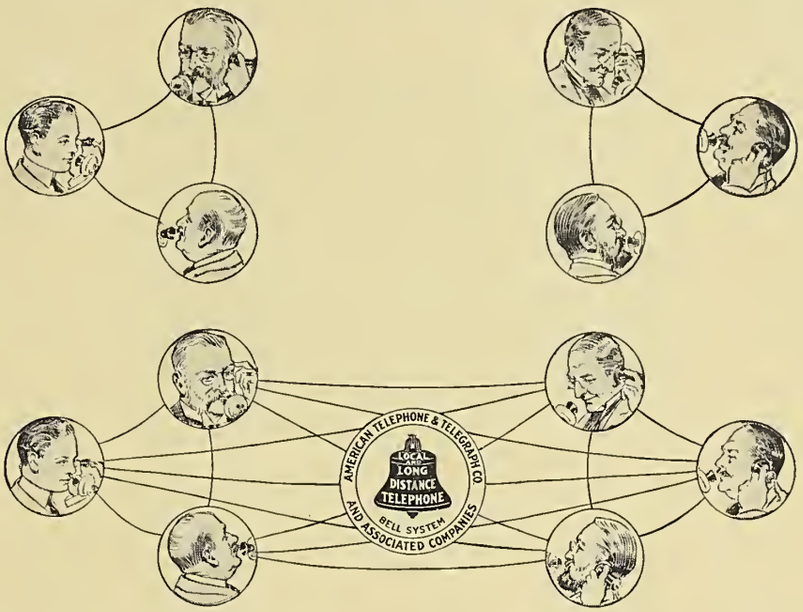
A Man, a Woman and a Garden

IT was the Big Man who first wanted the garden; but it was the Little Woman who brought it about at last, after they had failed for more years than one. The Big Man was city bred, but the Little Woman had been born in the country. When they were first married they lived in a city flat, where the only garden possible to them was contained in flower pots. They are coming back to flower pots again—but that part of the story must be told last. They were satisfied with the city flat until the babies came and then they decided that they *must* live in the country. Since it was impossible for the Big Man to make a living for them all and do that, they compromised on a suburb and left the numbered houses and the city flats forever.

Here the Big Man meant to have a garden. He cherished certain tender memories of blissful weeks which he had spent in the country while visiting the Little Woman in her home the year before they were married. At that time, in spite of traditions to the contrary, the Big Man's love affairs did not diminish his appetite. When he should have a garden of his own he hoped to raise such corn of his own, with such peas and egg plants as those he had eaten at the home of the Little Woman in the country.

In the back yard of their new home in the suburb there was a generous expanse of hard-pan clay, which had been scooped from the cellar when the foundations of the new house had been dug. This the Big Man chose for his garden plot. For a week he rose at five o'clock and laboriously turned over the clay until time to take the train to his business. This he did in secret as a surprise to the Little Woman. He planted it all on the same day with sweet corn, egg plants, tomatoes, cucumbers and parsnips. The Little Woman smiled with tender appreciation when he proudly displayed his garden—

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and his blisters—but when he had run off to his train she made a contract with the green grocer of the suburb for vegetables for the summer. The outcome proved that she was right; for the parsnips never came through the hard, sun-baked soil; potato beetles promptly devoured the egg-plants, root and branch; the cucumbers escaped an insect devastation by dying promptly after they came up before the striped bugs could reach them. The corn lingered out a sickly existence until late in July, when a neighbor's horse mercifully broke into the yard and ended its struggle for existence, before a single ear appeared to continue the species. As for the tomatoes, three tiny crimson balls finally reached a leathery ripeness, which were carefully served as a salad on the Big Man's birthday. Thus ended the history of the first year's garden in the suburb.

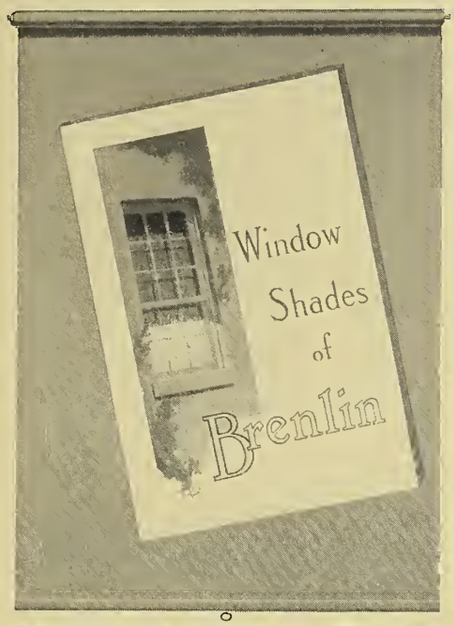
Then the Little Woman took her turn at the garden. She employed a man to sift coal ashes and cover the clay soil with them. Next she had him cover the whole plot with well-rotted manure and spade it down. This was done in the early fall, after the three tomatoes had ripened. The next spring she had more ashes sprinkled over the clayey section and a coat of bone dust broadcasted over the whole plot before the hired man forked it all over again. All this was pretty expensive—but they were determined to have that garden.

In the loamy section which had been spared when the clay from the excavation was hauled out, she planted lettuce, parsley, beets and radishes. She would have gone on with onions, tomatoes, and especially beans, but the soul of the Big Man yearned for sweet corn, and he planted the most of the remaining space with that.

During this second year the garden grew finely. Their lettuce left nothing to be desired. For three weeks they had radishes for breakfast every morning and for more than a month there was lettuce every evening for dinner. But one cannot live on these things. Then after a long while, there were beets, and then there was a prospect of corn, while the green groceryman supplied them with peas, beans, cabbage, and all the rest that they might have grown, if it had not been for those greedy, space-consuming corn stalks. At last the corn was ready for the table—and such delectable stuff it was! Nothing at all like the tasteless, leathery article which they had eaten while they had lived in the city flat. The Big Man renewed the days of his courtship. But there was so little of it. Even though they ate every nubbin, and only allowed the babies one ear apiece, there were only four or five messes of corn, which made that first crop cost several cents per grain. It was then that the Big Man declared that gardening did not pay. It might be carried on for the sake of sentiment, but not as a business venture.

But if other vegetables were a disap-

(*Continued on page* 186)



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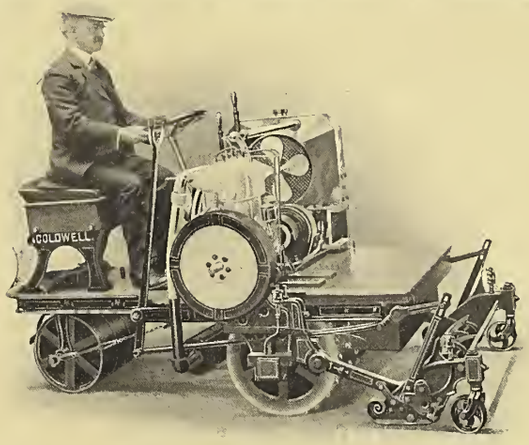
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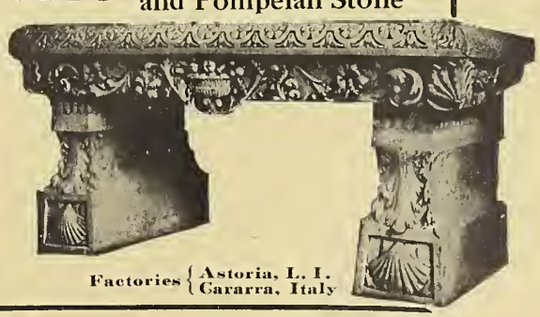
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(*Continued from page* 184)

pointment, there was plenty of parsley. Except the weeds, nothing ever grew more luxuriantly. There was parsley to use and parsley to give away; parsley for weekdays and parsley for Sundays; parsley for festive occasions and parsley for common days; parsley for soup and parsley for garnishing. They garnished nearly everything with parsley, all through the autumn and the following winter. They garnished all the roasts, all the broiled meats, all the stewed potatoes; they even garnished the fried potatoes. At last the Big Man proposed that they should have a dish of boiled parsley, so that they might garnish the garnishing.

But the Little Woman was wiser than her husband knew. She had kept that parsley on the table all through the winter, so that she might provoke the Big Man to garden-making the next spring. In this calculation she was not mistaken; for, although he had been discouraged with the two experiments, yet when he came home one warm day in April for a half holiday and proposed that they should have another garden, the Little Woman had already purchased seed and contracted with an Italian to dig up the ground.

This time the Little Woman managed the garden all herself. Corn, potatoes, pumpkins, and all vegetables requiring much space for their growth, were rigidly, although in some cases regretfully, excluded. On this third year they succeeded in raising so many luscious vegetables that they never again went back to the green grocerman.

Although they did not learn everything in the first year or two, and even yet they are still learning how to garden on a small lot, yet they have done so well that they would not think of omitting to plant a garden on this general plan:

1st. They plant only those vegetables which can be grown in a limited space, planting the seeds in parallel rows, which run north and south, so that the sun may have an equal chance at every stalk.

2d. They arrange their crops so that two, and often three, different kinds of vegetables can be grown on the same ground in the same year. This requires very rich soil and careful management in the rotation, but it can be done somewhat after this manner: *First planting,* which can occupy nearly the whole available garden space, spinach, radishes, lettuce, swiss chard, peas, onions, and beets. *Second planting,* beans, tomatoes, cabbage, cauliflower, and summer squashes, all of which can be planted between the rows already occupied by the first planting, if the ground is spaded over. *Third planting,* fall peas, celery, and turnips. Turnips can be broadcasted over space already occupied by almost any other vegetable and left to grow after the frost has killed almost everything else.

3d. They have secured the continual growth of the garden by constant cultiva-

(*Continued on page* 188)



FARR'S HARDY PLANTS FOR SPRING PLANTING

A REMINDER. The swelling of the buds in March reminds us it is time to get busy, if the garden picture our fancy has created during the Winter evenings is to become a living reality.

THE LOOK-AHEAD-GARDENER KNOWS that early spring is the best time to plant most things, and the only proper time to plant some things that should have a prominent place in every hardy garden, as:

Anemones, Hardy Asters, Chrysanthemums, Pyrethrums, Primroses, Campanulas, Tritomas, Foxgloves, Hollyhocks.

HE KNOWS no time may be lost now; that he cannot afford to risk having his garden picture marred by plants inferior, or untrue to name, and that he will save time, annoyance and money, by ordering from

THE LOOK-AHEAD-GROWER, whose complete collections of the best things enable him to supply all his needs with the assurance that he will get just what he orders without substitution. Knowing or wanting to know my plants, he will want My Book:

"Farr's Hardy Plants"

For the information and help which its accurate descriptions and suggestions for planting and cultivating will give—mailed free on request. Plan your Garden *NOW. WRITE ME TODAY.*

Bertrand H. Farr, WYOMISSING NURSERIES, 643 F. Penn St., Reading, Pa.

N. B.—Dickson's Famous Irish Roses, extra heavy dormant plants up to April 15th. Established in pots for later planting.

Gregory's Honest FLOWER SEED OFFER

We will send you these ten packages of Gregory's Honest Flower Seeds, postpaid, for 25 cents in coin.

90 cents worth for 25 cents

1 pkg. Aster, Gregory's Special Fancy Mixture,	10c.
1 pkg. Pansy, Gregory's Special Fancy Mixture,	15c.
1 pkg. Coreopsis, Gregory's Special Fancy Mixture,	05c.
1 pkg. Poppy, Gregory's Fancy Double Mixed Annuals,	10c.
1 pkg. Mignonette, Gregory's Large Flowering, very rich,	10c.
1 pkg. Bachelor Button, Gregory's Finest Mixture,	10c.
1 pkg. Petunia, Gregory's Finest Hybrid Mixture,	15c.
1 pkg. Candytuft, Gregory's Finest Mixed,	05c.
1 pkg. Nasturtium, Dwarf, Finest Mixed,	05c.
1 pkg. Sweet Peas, Extra Choice Mixed,	05c.

GREGORY'S HONEST SEEDS

10 packages *sent for 25c in coin.* Our new 1911 Catalogue, more profusely illustrated than ever, is just out. A copy to you for the asking.

J. J. H. GREGORY & SON,
89 Elm St., Marblehead, Mass.

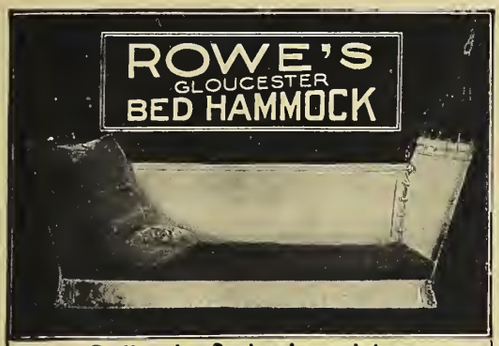
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WASHINGTON, D. C.



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The Perfect Couch for Outdoor Sleeping

A Rowe Hammock has hung for 8 or 10 summers on a porch within 200 feet of the Atlantic Ocean. Last season a visitor referred to it as "your new hammock" 40 years' experience show that Rowe's Hammocks give 10 years of continuous out-of-door service. As far as the signs of wear go, you can't tell whether a Rowe Hammock has been used 6 months or 6 years.

It is made by sailmakers on the model we supplied for years to the U. S. Navy. It is made from duck that is 60 per cent. to 200 per cent. stronger than that in others, and sewn with thread that is twice as strong. It has sewing and bracing that no other maker has learned the need of. It is handsome, but severely plain—no showiness, just solid merit.

Our Khaki is permanent in color, will not soil clothing.

A very few first-class stores are licensed to sell our hammocks. If not conveniently situated, you should buy direct from us. Delivery prepaid, ready for hanging.

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Orchid Growers and Importers SUMMIT, N. J.



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For 57 years we have been shipping to garden owners, all over the world, the best to be had in trees and hardy plants.

Thousands come to us yearly—we are their headquarters. If you own a garden you need to know us for your own good.

The flower pictured is one of our Mallow Marvel blossoms. We originated and introduced this wonderful strain of plants. Ask us about them.

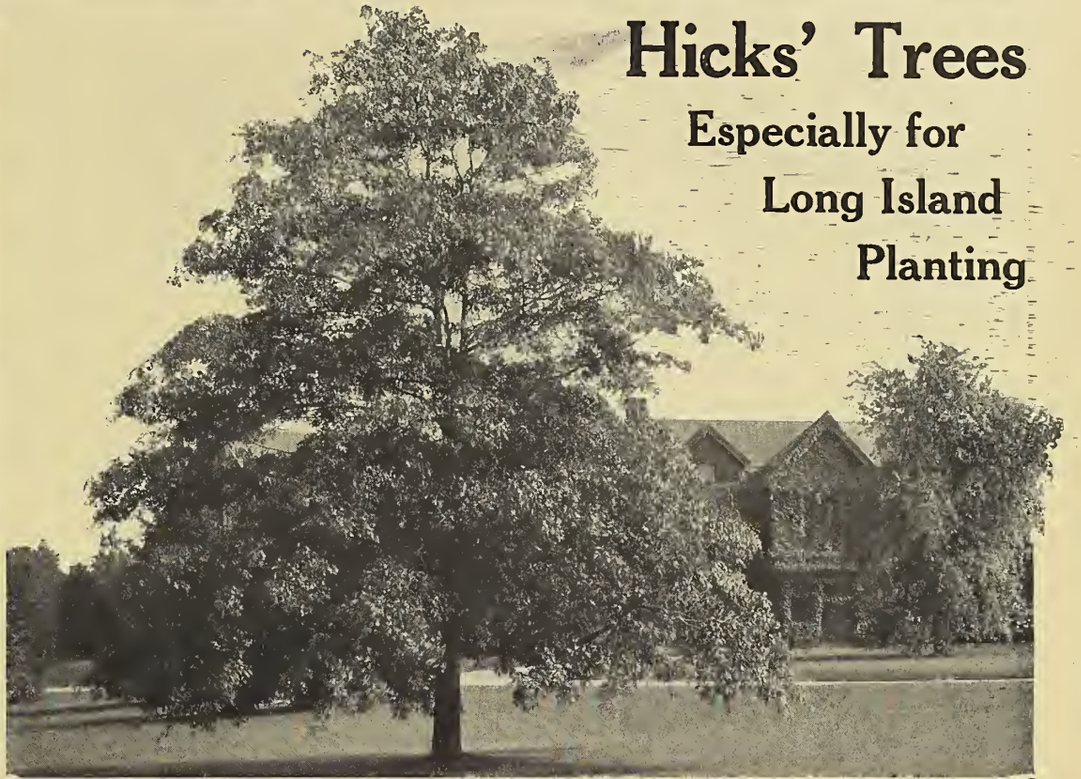
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Hicks' Trees
Especially for Long Island Planting

LARGE PIN OAK AND CUT-LEAF MAPLE MOVED TO CEDARHURST, L. I., BY HICK'S TREE-MOVERS A FEW YEARS AGO.

LONG ISLAND'S sandy soil requires drought resistant trees. Don't make the costly mistake of selecting the Elms, Basswoods, Poplars and Willows, you remember growing so luxuriantly on the mainland. On the mainland the rock or clay subsoil holds the moisture. On Long Island the water sinks through the sand and gravel to the water table, which may be thirty or one hundred feet deep, and therefore below the reach of tree roots. The trees that grow in river bottoms are the kinds generally grown by nurserymen because they are cheap to produce, live when transplanted with poor roots, grow rapidly the first few years after planting. On most of Long Island, however, they will commence to fail soon after planting and never reach that perfect health, which is essential to beauty. We have drought resistant trees grown from Long Island seed.

In our nursery are over 2,000 trees, 15 to 40 years old. They are big, broad specimens, grown wide apart like trees in an orchard. We can move these big trees right to your grounds and plant them for you. You secure at once a shady lawn and overcome all those long years of waiting for small trees to grow up. We will guarantee the trees to thrive if you wish us to do so. Our catalogues show what has been done on Long Island, and the stock available to solve your landscape problems. Send for them. If possible come down to the nursery and see how we move these big trees, and talk things over with us. You can select just the trees you want. Better do this the first day possible and get ahead of the inevitable spring rush.

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The ideal flooring for private houses and public buildings, is germ proof, fire proof, water proof and practically wear proof. It can be laid over any old or new floor, and presents a warm, non-slipping surface. Samples free.

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Unique in its 100 engravings of noted grounds and specimens.

Unique in what it lacks, viz: effusiveness.

Unique in its handsome discounts.

Large sizes for immediate effect. Specially low rates on car-lots of Rhododendrons and Conifers.

Harris Nurseries **Tarrytown, N. Y.**

(*Continued from page* 186)

tion with a rake or pronged weeder, rather than with a hoe. By this means the ground is kept always loose and soft on top, so that it never bakes or loses moisture, even during drouths. Under this sort of cultivation weeds do not exist.

Now the Big Man is experimenting to obtain earlier vegetables by the use of a hot-bed. Beets, which always grow better if transplanted, are started under glass. Tomatoes he raises in flower pots until they are ready to blossom and bear fruit, as soon as it is warm enough to transplant them. Even sweet corn, for which he still hankers, is planted in strawberry baskets in the house, a hill in each basket, and then transplanted. Summer squashes are planted in the same way, and the boxes carefully cut away when he transplants them to the open ground. These last are the frills; but the garden itself is always full of solid achievement.

William Futhey Gibbons.

The Commuter's Long Island

(*Continued from page* 211)

Neck Bay and Bayside. At the head of the Bay is Douglaston, and farther on the village of Little Neck, followed by Great Neck, which occupies the high bluff between Little Neck Bay and Manhasset Bay. Here the farms have rapidly given way before large estates. Manhasset lies along a steep hillside with the Bay to the north, while half-way up the neck on the east lies Port Washington with its miles of water front and its unusual attractions for the yachtsman. Across Cow Neck which divides Manhasset Bay from Hempstead Harbor, lies Roslyn, another community mainly of large estates. Glen Head, Sea Cliff, Glen Cove, Nassau, and Locust Valley occupy the long slope on the east side of Hempstead Harbor, while further east on Oyster Bay are found Middle Neck and the town of Oyster Bay.

Everyone has heard of Manhattan Beach and Coney Island, but of more interest to the commuter are some of the quieter and more homelike communities lying back of Sheepshead Bay on the mainland. There is Rockaway Beach, with its summer colonies of Belle Harbor and Rockaway Park, sixteen miles from New York. Arverne, Edgemere, Far-Rockaway and Ostend are cottage and hotel colonies resembling the Atlantic City type.

Turning back from the beach, the railroad touches Lawrence, the location of many excellent bits of domestic architecture, and Cedarhurst, still further inland with many of the larger class of homes. Woodmere and Hewletts also have become famous for their excellently designed houses. From Valley Stream, which is a junction point, the Montauk road continues to Lynbrook, from which a spur runs south to East Rockaway and Long Beach, with its seashore hotels and cottages. From Lynbrook the Montauk di-

(*Continued on page* 190)



Strawberries for Your Guests and You, from Your Own Garden

It is much easier to have a real appetizing breakfast, luncheon, dinner, or a supper, in strawberry time, than in August or at Christmas. Guests appreciate Strawberries, just as the little boy did who said, "I go to the garden to eat Strawberries before I breakfast, and before I go to bed, and lots of times between." If your patch is as big as 50 by 100 feet you will have berries for every meal all season, and plenty to eat from the patch, to preserve, or flavor sherbets, etc. It will give all of you—babies, parents, and old folks, if there are any—a chance to exercise and relax outdoors. Strawberries lead to health, in the eating and in the growing.

Money to Be Made from Berries

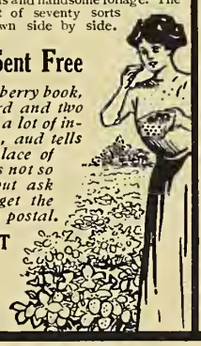
Neighbors will buy what you can't use. By starting a bigger patch in your garden, and buying crates, it is easy to clear ten, twenty or even fifty dollars. If there is plenty of space—a summer home or a farm—any amount of money can be readily made.

Get King Edward Strawberry

A new one,—berries big, conical, light red, uniform, rich, mild, firm but crisp; ripens early and over a long period. Vigorous, healthy, with perfect blossoms and handsome foliage. The best of seventy sorts grown side by side.

Our 1911 Berry Book Sent Free

Get our unusual and complete berry book, which tells about King Edward and two dozen other kinds. It contains a lot of information valuable to growers, and tells how berries can be used in place of other food that costs more and is not so good. Yes, free, of course,—but ask soon, or some one else will get the last one. Use your pen and a postal.



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There Are Specific Reasons Why the U-Bar Greenhouse Is the Best for the Expert and Amateur

There are many strong points about the construction of the U-Bar Greenhouses that make it by far the best, not only as a plant producing house, but as best adapted for the home grounds. The absolute simplicity of the construction is one of its strongest points.

Every roof bar is encased in a steel U-Bar, giving the house a complete framework of steel, having great strength and an unequalled endurance. Because of this complete steel frame the house can be made very much lighter than other constructions. Lightness is what you need in a greenhouse. This is especially important in the short, dull days of winter. Fact is, U-Bar Greenhouses are as near actual outdoor conditions as possible, and still be indoors.

One of the special features of the U-Bar Greenhouse is its Curved Eave, but all curved eave houses are not made with the U-Bar. We are the sole owners and builders of the U-Bar Curved Eave construction.

Our catalog describes and illustrates pertinent U-Bar construction points in an interesting, readable way. Send for the catalog.

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ANY man-about-the-house or carpenter of ordinary ability can set up these pergolas by following the simple instructions we send with the crated sections.

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"The best effect in the space. The longest period of bloom"

A Wagner Hardy Border provides, *at slight cost*, pictures of living beauty from earliest spring till frost.

Finest-grown hardy herbaceous perennials arranged for color harmonies, picturesque outline, continuous bloom and *permanence*.

A Wagner Border, varieties *labelled, numbered and packed in order of planting*, saves money on regular catalog rates; saves the trouble of planning; insures *certain success*.

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Border B1—4 x 10 feet,	15	strong,	hardy	plants,	**$2.25;**	extra large,	**$ 3.75**
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REMEMBER—You make your selection from more than 600 acres of choicest nursery products—from *our own gardens* shown below, which have been growing for more than half a century. The finest collection of trees, shrubbery and garden plants in America; all hardy and old, well-established growths.

REMEMBER—Our expert landscape gardeners plan your place for you, selecting plants suitable to soil and situation, with special regard to immediate and permanent effects.

REMEMBER—We make a specialty of moving and planting large trees and shrubbery, and furnish from our nurseries all varieties of large trees, evergreens and conifers to screen unsightly views or to produce woodland effects.

Everything for the home garden, including fruit trees, berry bushes, etc.

Write at once for Catalog D and let us know your plans.

THE STEPHEN HOYT'S SONS COMPANY

Est. 1848 — **NEW CANAAN, CONN.** — **Inc. 1903**

(*Continued from page* 188)

vision continues on eastward to Rockville Centre, an active trading point. Baldwin, already mentioned as the average commuting distance from New York, Freeport, Merrick, Bellmore, Wantagh, Seaford, Massapequa, Amityville, Copiague and Lindenhurst.

Babylon lies just beyond, the largest town since leaving Jamaica. With Bayshore and Islip, it has a magnificient location on the Great South Bay and is further blessed by many fresh water lakes, old trees and wide streets. From here the commuter who wants all the sea air he can get may take a boat across the Bay to Saltaire and Ocean Beach—two comparatively new communities on Fire Island. At Great River, the next station beyond Islip, and forty-six miles out, an arm of the Bay provides special facilities for small boating. Beyond this, about Oakdale, are some of the large estates, while at Sayville the typical home is nearer the middle-class purse. Bayport, Blue Point, and finally Patchogue, nestle around Patchogue Bay. Patchogue is the most flourishing city of the South Shore. Beyond it lie many communities which to their inhabitants and friends surpass anything on the western end of the Island—the picturesque Hamptons, Aquebogue, Mattituck, Cutchogue, Southold, Riverhead, and Amagansett, but they are, for most people, beyond the commuting zone.

Not many years ago the pioneer commuter blazed the way for all this; and to him is due much of the credit for carrying out into the country the comforts and conveniences that we now demand as a matter of course. Drainage, adequate water supply, gas, electricity, libraries, good roads—all these were counted luxuries by the pioneer of but a few short years ago; to-day they are the necessities that we insist upon.

Modern invention, too, has helped along this great movement of the city's toilers out into fresh air and quiet, out among the trees and the growing things. She has brought us the individual drainage system, the individual water supply without the difficulties of the past, the individual power plant for generating electricity. Only yesterday she has brought, through the German chemist, Hermann Blau, an illuminating gas that seems particularly well suited to the needs of the isolated home or group of homes that has no public service supply. The gas is subjected to a pressure that liquefies it and permits of its being transported in iron cylinders, which are connected directly to the ordinary piping systems.

To sum up, if you will, divide the Island into zones. At Jamaica and Flushing there is the country house, but still in immediate connection with the city either by trolley or train; from there on to the line of Patchogue is the commuter's section, and here are the colony developments and estates—both for the man of moderate means and the millionaire.

(*Continued on page* 192)

10 CHERRY TREES for $1.95

This very special collection of 10 Hardy Cherry trees will be sent you for $1.95. The selections were made by Mr. Green personally, as the result of his 30 years' experience as a successful fruit grower. Here is the list—there is none better—all gilt-edged, first-class, largest size, 2-year-old trees, and all for $1.95.

One Dyehouse, three Early Richmond, five Montmorency, one English Morello. The true value of these is $2.25 according to Green's "Direct to you" Prices, but others would charge you much more.

Here is another—a Plum—bargain: Six first-class Plum trees, medium size, worth $1.50, Green's "Direct to you" price $1.00. The varieties are as follows—1 Burbank, 1 Abundance, 1 Niagara, 1 Bradshaw, 1 Lombard, 1 York State Prune—6 in all.

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DIRECT TO YOU.

There are many other Bargain Collections of trees to be found in our 1911 Catalogue—larger, finer and better than ever before. Every tree we send you is first-class, thrifty, north-grown, triple inspected and guaranteed true to name.

We sell direct—have no agents—and our prices are only one-half what agents charge. Read this:

"My trees arrived in good shape. They are fine, better than some of my neighbor's trees which cost twice the price I paid."

Send today for our 1911 Catalogue to convince yourself. We will also send you free our souvenir book, "30 years with Fruits and Flowers."

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a trial I will send 10 Large Field Roots for $1, no two alike, and to include some of the New Century Dahlias. Express charges to be paid by purchaser.

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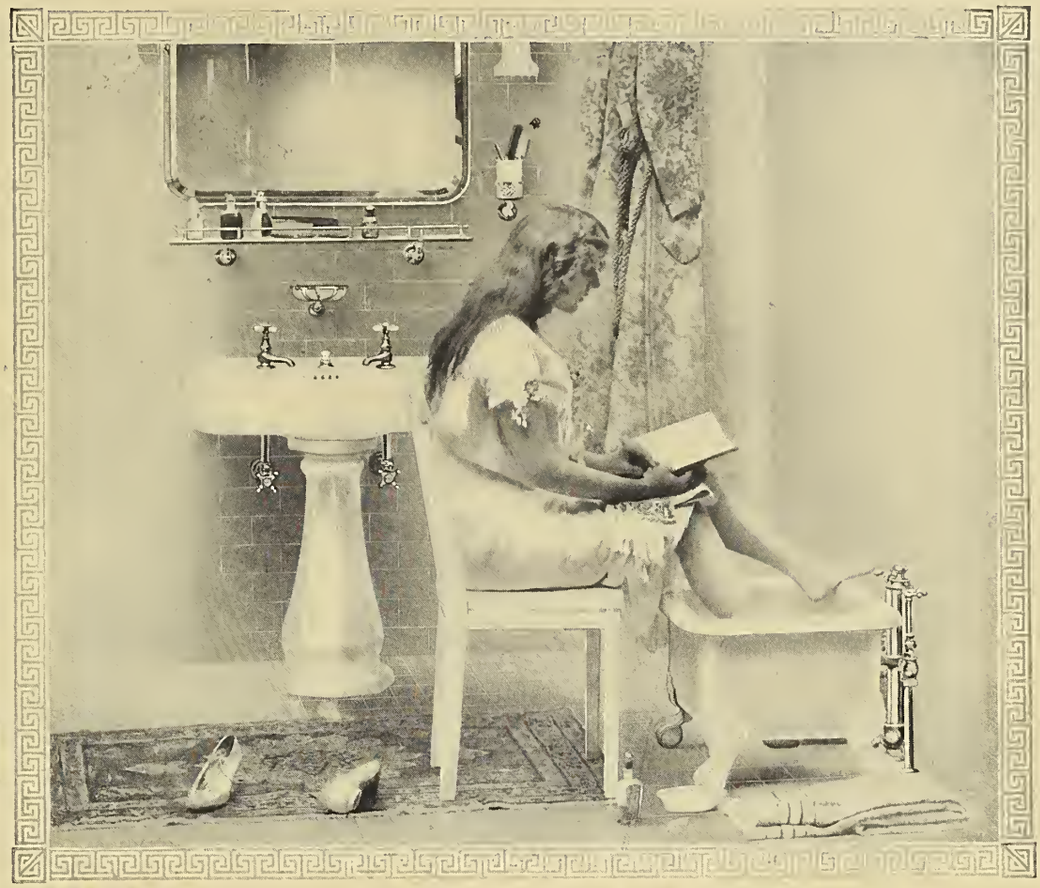
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Send for a copy of our beautiful book "Modern Bathrooms." It will prove of invaluable assistance in the planning of your bathroom, kitchen or laundry. Many model rooms are illustrated costing from $78 to $600. This valuable book is sent for 6c. postage.

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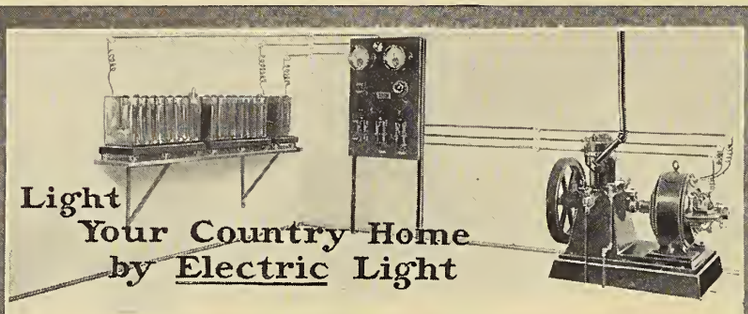


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(*Continued from page* 190)

Here one can live in a park, with community advantages or in other sections have a house and small farm—or, different still, have an estate that rivals the manors of England, and at the same time have the choice of the seashore or the bluffs and hills overlooking the Sound. From Hicksville, in the center of the Island and midway between these points, stretch the farm lands, where one can shake off the fetters of city life and earn a living from the soil. Still further east on either shore come the summer homes and resorts that even now are famous, but bid fair to be an American Riviera or Ostend.

The Flower for the Million and the Millionaire

(*Continued from page* 171)

variety. Put these pots in a well-protected coldframe or in a cool greenhouse, near the light. If you have neither, try them in a cellar window. The idea is to keep the growth sturdy but dwarf. When the young vines are two or three inches tall support them with twigs in the pots. Do not, of course, allow the young plants to be caught by frost. Even if they are, however, you can follow the old method of planting the seeds directly outdoors, so that you are losing nothing but a few seeds by trying this pot method.

The young plants may be set out any time from early in March to early May, according to the latitude and weather conditions. A potful will be sufficient for a clump, if you prefer to grow them in clumps rather than rows. If you decide to follow the old method, however, allow a space of eighteen inches between each potful. Set the whole ball of soil, with plants and twigs, into the prepared soil outdoors so that there will be no shock in the transplanting.

If you follow the old method of planting the seed outdoors do not make the common mistake of planting too much seed in the given space; use about one ounce of seed to a fifteen-foot row, covering it with two inches of soil. Firm this down and dust the top with soot from a smoke-pipe; this will keep away birds and insects.

When the seedlings are about two inches high thin out the young plants so that the remaining ones will have a fighting chance for their life. Leave but one plant to every six inches. It is a great temptation to leave too many plants growing, but thinning is the only way to get stocky, healthy vines. You will get not only larger flowers but more of them, longer stems and better color.

Hoe up the soil towards the young vines as they grow, having been careful, in the first place, to sow the seed so that the covering soil was in a trench about four inches below the surface.

Of fifty-two experts on sweet pea culture, forty-seven were found to be in favor of sticks—hazel brush preferably—for the

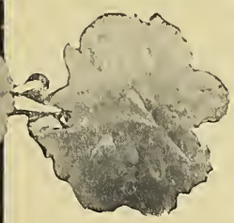
(*Continued on page* 194)



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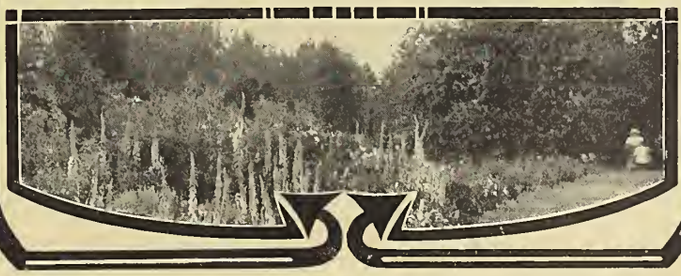
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Fifth Ave. and 17th St., New York

(*Continued from page* 192)

supports. Cut boughs that have plenty of twigs on them, either in the fall or early in the spring, and insert them in the ground for at least a foot, so that the tops are wider rather than narrower than the bases. This will afford space for the vines to spread out at the top. If you really have not room for the brush supports, wire mesh will serve very well. The six-foot width will be sufficient for the latitude of New York, but in the northern States and Canada the width will have to be increased.

Here are just a few points to remember in cultivation: In case of very hot and dry weather apply a mulch of manure or grass cuttings, extending for a foot on either side of the lines. Water two or three times a week over this.

Apply liquid manure only after the first blossoms appear, and then sparingly, alternating with clear water. Strengthen this food when the vines are in full flower.

Put about a peck of soot in a bag and let it dissolve for a few hours in a barrel of water. The resulting solution will serve both as a plant food and insecticide.

In watering do not neglect spraying the vines themselves. It serves not only to refresh the foliage but helps to keep it free from insects.

The only pests that are likely to bother the sweet pea are the cut-worm, the red spider and the green aphis. Soot will help to keep the cut-worm away and a spraying of whale-oil soap or kerosene emulsion will rid the vines of the other two enemies. The greatest enemy of all, however, is usually the amateur gardener himself, in not working the soil deeply enough at the start and in not keeping it cultivated along the rows. Starting with a well-worked and well-enriched soil to a depth of three feet; keeping the seedlings six inches apart; hoeing the row every few days until the vines are well grown; and cutting the flowers daily—these are essentials to success.

Hotbeds and Coldframes.

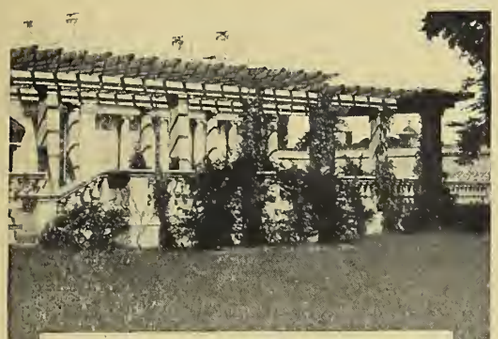
(*Continued from page* 153)

sash to provide fresh cool air every day after danger of freezing is over. In some types of hotbeds, the sash slide in grooves, but ordinarily they can be lifted up and blocks of wood placed under the corners to hold them up.

An amateur will probably have better success with a coldframe than with a hotbed, as its care does not involve quite so much garden knowledge. There is really nothing complicated about either, however. The principal thing is to keep the growing things well watered and to give them a maximum of sunlight and the necessary amount of fresh air.

A hotbed is really a greenhouse on a small scale and practically the same possibilities are open to it in the hands of an expert. Violet and pansy culture is extensively carried on by this means, and flowers are obtained in the winter and early spring that are the equal of those grown in large commercial hothouses. The

(*Continued on page* 196)



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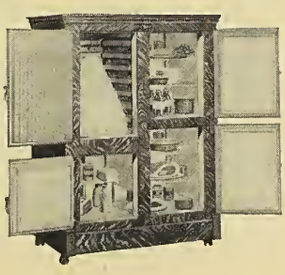
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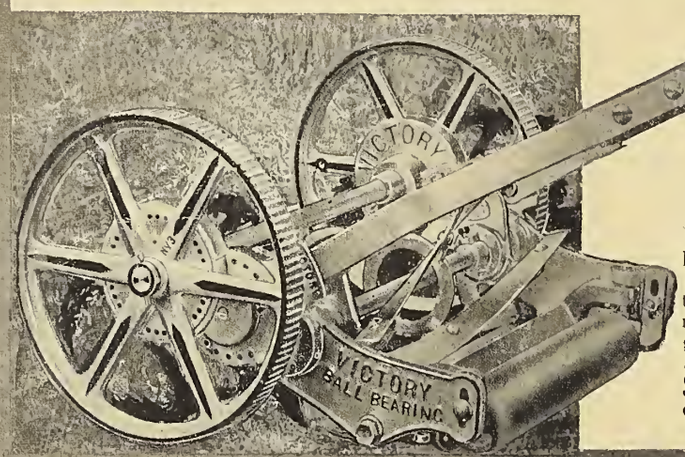
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"EVERYTHING FOR THE GARDEN"

our 1911 catalogue, is without exception the best we have ever issued. 208 pages, 8 colored plates, 800 photo engravings, showing actual results without exaggeration, make it the most complete as well as beautiful horticultural publication of the year. Also contains full cultural directions for flowers and vegetables.

PETER HENDERSON & CO. 35 & 37 CORTLAND ST. NEW YORK CITY

(*Continued from page* 194)

beginner, however, had better start by planting seeds in the early spring to obtain plants to set out in the open later.

A standard unit in hotbed and cold-frame construction consists of a frame of four sash, each three feet by six. In such a hotbed all the flowers and vegetables that a small garden can possibly use may be grown. One sash may be devoted to early lettuce and radishes, another to flower seeds, and possibly the third and fourth to vegetables that are to be transplanted. The usual method is to plant the seeds in flats and later to transplant them directly into the soil of the hotbed.

There is a profitable side to hotbeds that need not be overlooked by any gardener not averse to turning an honest penny. A small paper of tomato, egg-plant or pepper seed will produce enough plants for a dozen gardens, and as a rule a ready market may be found for the excess plants at ten or fifteen cents a dozen.

It is a good plan to first soak in water all the seeds that are to be planted in the hotbed. This will insure their germination more quickly. It is also an excellent practice to mix small garden seeds with three or four times their bulk of dry sand before sowing. In this way the tendency to plant too thickly will be modified somewhat, but you may be sure that in any case you will have many more plants growing in a given space than can do well, so that the thinning process must be carried on with a heavy hand. If your plants grow spindly and "leggy" it is because they are too far from the light. The inside ground level of the hotbed should be not more than six or eight inches from the glass to insure the best results.

If the soil in which the plants are growing is poor, their growth may be greatly stimulated by the use of nitrate of soda. This chemical, however, will burn them unless it is used in very dilute solutions. A handful to a pail of water is sufficiently strong.

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(*Continued on page* 198)

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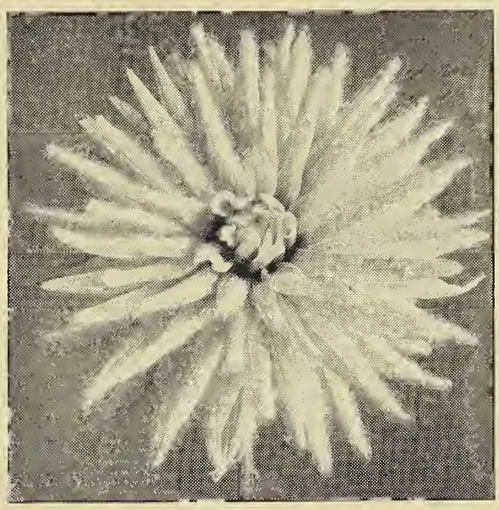
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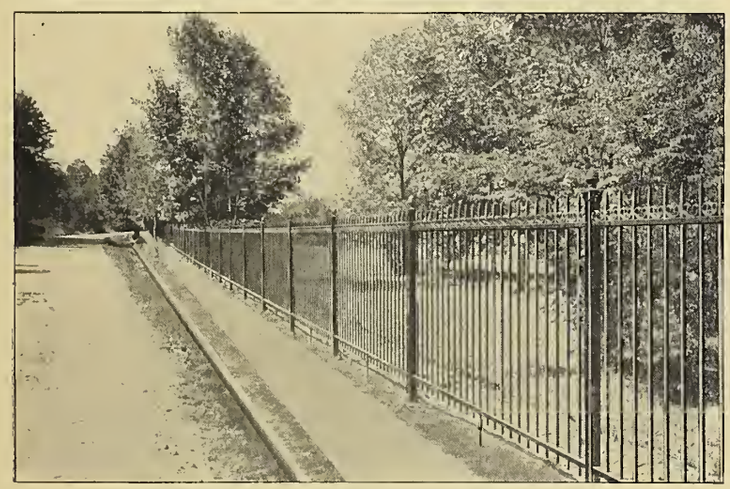
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25 YEARS IN BUSINESS 25 YEARS IN BUSINESS

(*Continued from page* 196)

Petunias and nasturitiums might also be mentioned in this connection, but they are unreliable in regions when severe cold is felt.

It is evident that the seed of these hardy annuals can be sown as readily in fall as in spring. Indeed where conditions permit I deem it advisable to sow them in fall. The ground must necessarily be well prepared, for if their self-sowing qualities are to be taken advantage of, it



Annual Phlox, the second year after sowing

is clear that the earth can not be spaded up again for several years. All the soil needs subsequently is a light raking or weeding over in spring. You will find it necessary to thin out the plants the second year after sowing. To say that for a few cents one may have years of bloom sounds a little like some of the exaggerated wording occasionally found in seed catalogues, nevertheless from personal experience I can say definitely that in the case of the annuals mentioned above, ten cents' worth of seed of each kind will provide an ever-increasing amount of bloom and this, moreover, with comparatively little work after the first thorough preparation.

C. L. MELLER

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CONSIDERABLE of the wealth of the East was built up by the production and distribution of perfumes. In France to-day a perfumery industry of great importance has been established whereby the production of lavender, cassia, rose, violet and other essences is carried on. England, Germany, Italy, Turkey, Bulgaria, Algeria and other countries are important producers but the United States at present uses the oils of few plants for commercial purposes. There are, however, a great number capable of yielding oils of value. Those cultivated at present are principally the mints, wormwood, tansy and wormseed. Wild plants include sassafras, wintergreen, sweet birch, Canada fleabane, blue gum, wild bergamot, horse mint and fleabane. Bulletin Number 195 of the Government Bureau of plant industry contains information of plants which can be used for perfumeries and commercial oils, also the processes and apparatus necessary to carry on such work.



Residence of George Ade, Brook, Ind (Stained with Cabot's Shingle Stains.) *W. D. Mann, Architect, Chicago*

Residence of George Ade, Brook, Ind.

SHINGLES, SIDING and TRIMMINGS

stained with

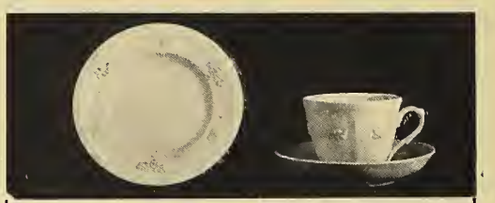
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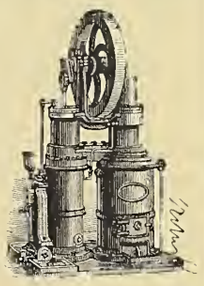
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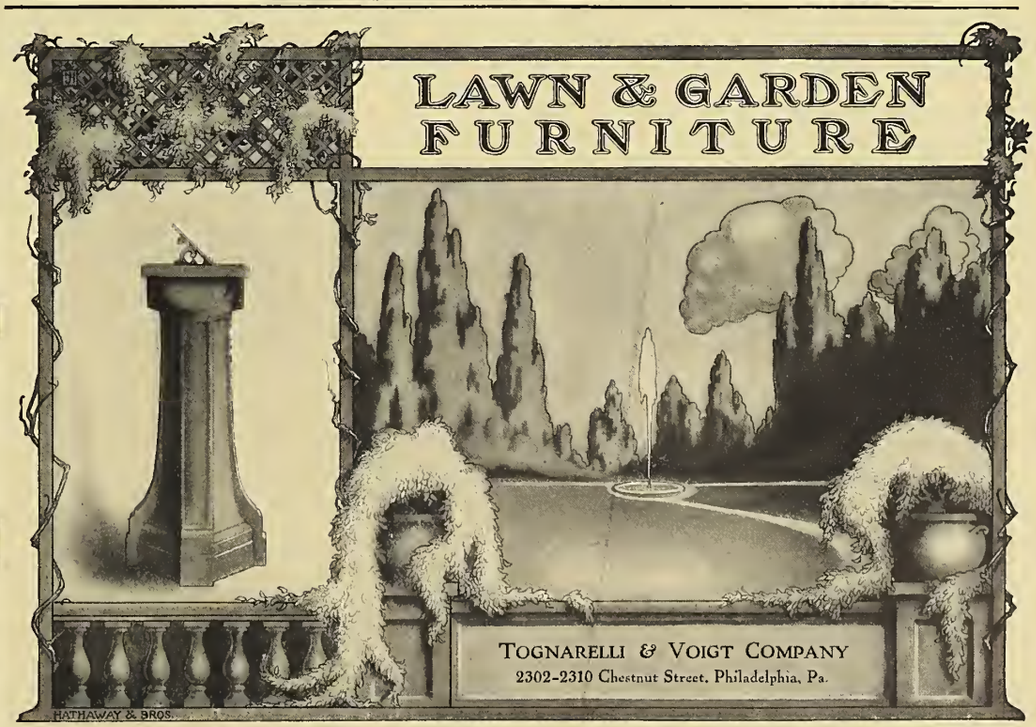
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IF you had satisfactory facilities for Lighting and Cooking in your country house, the value of your property would be very materially increased.

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The only way to appreciate the advantages of Blau-Gas is to see it in actual operation. Ladies are particularly urged to see Blau-Gas used for cooking and water heating. Write us for name of some user in your locality. We will always be glad to give you personal demonstration at our Long Island City plant, or will send full descriptive booklet on request. SEND FOR IT TODAY.

We are prepared to install Blau-Gas immediately at all points on Long Island; also on Staten Island and in Connecticut

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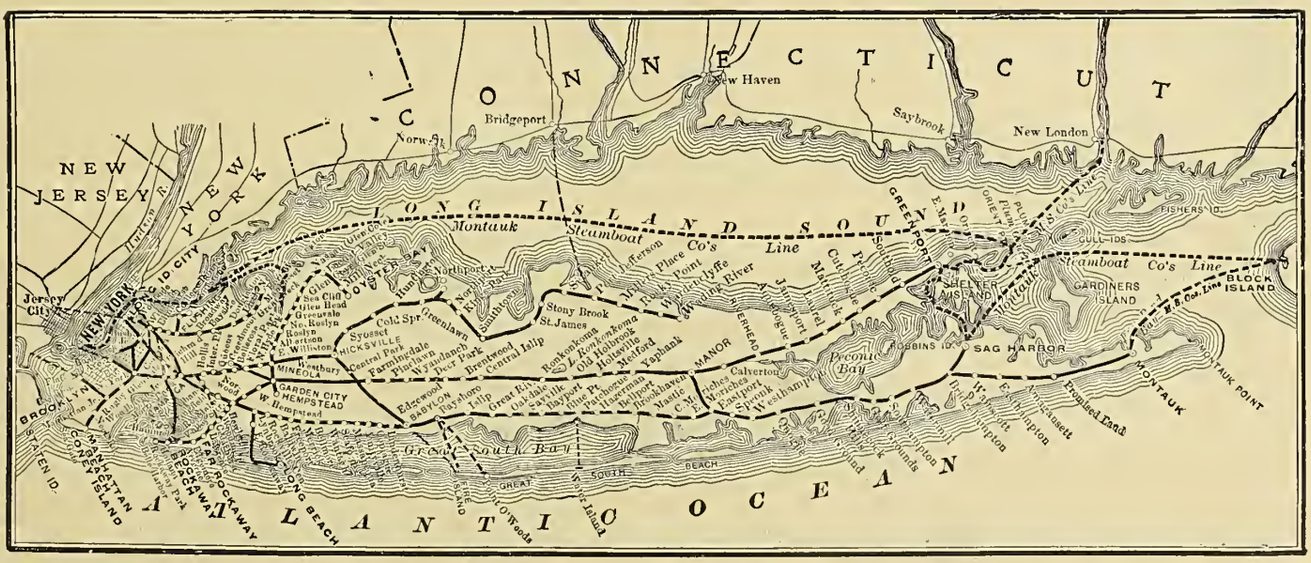


The Long Island Supplement





The old and the new





An example of how the soil of Long Island has been deposited by glacier action is shown at Montauk Point, the eastern extremity. It is proposed to make a landing here for European steamers, which would bring the United States in still closer touch with the Old World

Long Island—Its History and Character

THE EARLY SETTLEMENTS AND THE LONG PERIOD OF UNREST IN INDIAN DAYS AND DURING THE REVOLUTION—THE ISLAND'S GEOLOGICAL FORMATION AND ITS VARIED TOPOGRAPHY

BY WILLIAM A. VOLLMER



FAMILIARITY does not always breed contempt, and a closer knowledge often induces affection. Everyone feels a little brisker pulsation at the realization that he is upon historic soil, Massachusetts folk, for instance, have pardonable pride in the many spots endeared by a historical connection—yet Long Island can boast of as old a settlement as hers and as great a Revolutionary struggle as Bunker Hill; upon her soil lived as great men and about her serried coast line cling as romantic stories. With the satisfactory warmth of feeling that comes of the knowledge that this section is intimately connected with the early growth of our country, an added interest is found here which gives it all the charm and dignity of any of the old towns in Europe. A brief examination of Historic Long Island makes this apparent.

Long Island is geologically dissimilar to rocky, sparsely-covered Manhattan; her hills and deeply indented harbors have no resemblance even to Connecticut, only just across the Sound. In accounting for this striking variance of characteristics the geologists look to the conforming powers of the glacier period. In ancient times, they claim, a large body of ice, drifting southward, spread over all the land. It followed the main features of the country, moving through lake beds and along valleys, and reached the latitude of Long Island, extending westward in an irregular line across the continent. In the course of these glaciers' progress the soil was scooped up and dragged along, some pushed before the glacier's mouth, other portions embodied in its substance, and still more upon its surface. With the cessation of its advance, this soil and rock was heaped up at its terminus, and, as the ice gradually receded, was left in the form of rolling hills. Long Island is, then, the terminal moraine of a great glacier. The rocks and soil characteristics of Rhode Island and Massachusetts found here, besides typical gravel beds and quantities of glacier-scratched stones, substantiate this conclusion.

As new causes operated, some of the land subsided; this, together with the action of the sea, accounted for the present configuration. For the 120 miles of its extent Long Island is ridged by a line of hills which extend unevenly from Brooklyn Heights through Queens and Forest Park, east to Roslyn, near where Harbor Hill is 320 feet high, and through Huntington and Port Jefferson to the ocean extremity. Upon the north coast the shore is so indented by harbors and bays that at one place a straight-line distance of ten miles has a water boundary of eighty-one miles. The center is a wide stretch of plain, while the Great South Bay upon the southern side notches this with river-like creeks and inlets. Long stretches of white sandy beach occur on the



The Old Mill, at Huntington, still in good repair, and a reminder of the picturesque Colonial times

ocean side of this bay, noted for the weird dunes of shifting sand, everywhere in evidence. Rivers and streams abound and there are several considerable lakes—in fact, almost all types of scenery and formation are represented. In much of the surface the soil is of exceeding fertility, while the long considered desert area is now being proved especially adapted to certain kinds of crops, and the great beds of marine shells are at hand to render all fertile.

Perhaps this variety of attractions drew the early explorers to Long Island. At any rate it is believed that this was their first place of landing. Some have it that John de Verazzano touched here in 1524. But from Hendrick Hudson's account of his discovery, it is quite probable that Coney Island was the first landing place, and that the Canarsee Indians were the savages whom he saw in 1609.

When the tide of colonization began to turn upon this land in 1620 the Indians were found peaceable enough. They appeared to be of a less virile stamp than the Pequots or other tribes on the mainland, and perhaps on account of their geographical position, became less warlike. They were probably all of the Delaware nation, however.



Where John Howard Payne spent his boyhood. This interesting Easthampton house inspired "Home, Sweet Home"



A relic of the days of persecution — the old Quaker meeting-house at Manhasset

An interesting account of Indian habits is found among the writings of an early Long Island minister, the Rev. Mr. Denton, who states that they lived by hunting, fishing and agriculture—chiefly corn-planting, in which the squaws were the husbandmen. They were nomadic and lived in tents, settling here and there as fancy directed. Their recreations were "foot-ball and cards, at which they will play away all they have excepting a flap to cover their nakedness." So prone are they to get intoxicated that "if there be so many in their company that there is not sufficient to make them all drunk, they usually select so many out of their company proportionable to the quantity of drink, and the rest must be spectators."

They never gave the white man much trouble, and by 1783 had practically disappeared.

Though the Indian's career was so short after the white man's advent, his presence will be forever remembered in the place names which his language has given us—and which designate many beautiful spots on the island that he called "Land of Shells"—Seawanhacky. Most of his locations were named from their physical characteristics—Amagansett, "near the drinking place"; Mahchongitchuge, a Montauk swamp "where rushes grow"; Ronkonkoma, "boundary fishing place"; Haupauge, "flooded land"; Setauket, "land at the mouth of the stream." Most of these characteristics aptly fit the towns today.

Into a land of so many physical attractions and inhabited by the peaceful savages who have been described above, gradually moved the settlers. Probably the first came from New Amsterdam in search of wider and newer lands, but the Connecticut and Massachusetts colonies later supplied many more, and many came direct from over the sea. From 1619 to 1648 settlements grew to towns, among them Brooklyn, Gravesend, Newtown, Flushing, Hempstead, Southampton, Easthampton and Southold. But there were many difficulties in their path. In the first place the jealousy and conflicting claims of the Dutch and English retarded growth. Lord Sterling claimed the island from Cabot's discovery and the King's grant; the Dutch insisted that Hudson's landing made it theirs. In the meantime, the English were buying land from the Indians under the consent of Lord Sterling's agent while the Dutch governor granted the same section to his own countrymen. Stuyvesant ruled with an iron hand over Gravesend, Newtown, Flushing, Jamaica and Hempstead, where the English were forced to become Dutch subjects. Later when the English captured this territory in 1664 the "Duke's Laws" went into effect, with clauses against witchcraft, decreeing punishment of death for anyone who should "deny the true God or his attributes."

Between the two grindstones of Duke's Laws and Stuyvesant's Edicts, it would seem that the Quakers would have had little chance to become successful colonists. Their search for religious freedom discovered little peace, yet they helped to build up the land notwithstanding persecutions. In Flushing their sufferings



In former days this beach was patrolled by the whalers. When the alarm was given, the whaleboats were launched from the shore



There is an interesting contrast between the quiet coves and harbors of the North Shore and the wave-washed beaches of the South

were terrible. To harbor a Quaker was a crime, and the courts fined one man "for permitting Quakers to quake at his house in Gravesend." Neither threat, fine, imprisonment or banishment could deter these enthusiasts, and they suffered for a long period, living continually in apprehension and danger.

What with war and witchcraft, heathens and heretics, the times were strenuous. King Philip's war on the mainland kept the people in fear of local outbreaks, and under arms even at church. Prosecution and persecution seemed synonymous, security was unknown. Pirates continually sailed along the shore and dropped down to rob and plunder. In the records note is made of this situation in voting Cap. Kidd 150 pounds "for his many good services in attending with his vessel to guard against enemies and pirates." But after being commissioned to protect the British interests in the east, he captured a Moorish vessel and turned pirate himself, boldly cruising along the Malabar and Madagascar coasts in his *Adventure Galley* taking prizes and plunder. In a rash moment he returned to Long Island waters and, after burying treasure on Gardiner's Island, was captured and hung in 1701. Lyon Gardiner, who owned Gardiner's Island, was aware of the location of the treasure and it was recovered to the State. Legend has it that much more is buried along the Sound shore, but the treasure referred to is probably the golden opportunity of the soil.

The hardships of a new land were barely surmounted when the Long Islanders again found themselves embroiled. Realizing the stategic importance of this land, the first campaign was planned to get possession of it. Today there are few signs of the brave struggle of the Battle of Long Island, where the Colonists' heroic efforts seemed in vain. After this defeat the Island was in complete control of the British, and suffered all the horrors of a local war until peace was declared. The prison-ships lay anchored at Walabout, each day bringing some new and ghastly tale of cruelty and death. The fields and farms were continually sacked for the army, and the sons and fathers of the inhabitants impressed and shanghaied into the British service. Those who avoided these troubles had Hessians quartered upon them. To add to their pitiable condition both Whig and Tory suffered at the hands of the whaleboat men.



Long Island is dotted with such farm-houses as this one, dating from Colonial times. They offer splendid opportunities for remodeling, to accord with the more comfortable mode of life of today

The scoundrels and riffraff that a war brings to the surface, under pretense of getting supplies for the British, preyed upon both sides. Landing in whaleboats, they robbed and plundered the inhabitants, often torturing them to reveal the hiding places of their valuables. Lloyd's Neck, Sand's Point, Southhold and Sag Harbor all have vivid recollections of terrors caused by this mode of warfare.



Northport Harbor, once a ship-building center, second only to one or two New England ports, such as New Bedford

Peaceful days came at last and the ship-building and whaling trades again began to flourish. In the early days whales were common in the adjacent waters, and the inhabitants found their pursuit a profitable employment. To such an extent was the traffic carried on that ministers' salaries were paid in oil. Every man of sufficient ability was obliged to take a turn in watching for whales from a lookout tower upon the beach. When one was seen, a general alarm was sounded and the boats manned for the chase. Today many relics of the time when Long Island was New England's only rival in this romantic trade are still seen.



Long Island is not all flat plain—there is much of beautiful woodland, marked by great century-old trees

Upon such a historical setting as this the ancestors of the sorely tried Colonists today dwell where their forefathers lived, and the scenes of former times are everywhere brought to mind in the sturdy old buildings of Colonial time, almost as sound as the day they were built. Some places, such as Easthampton, seem to retain all the characteristics of their former appearance. Almost every town has its old mansion or ancient farmhouse, about which such thrilling events took place—the Bowne House at Flushing, built in 1761, where John Bowne suffered for his belief and where George Fox visited, the King Mansion at Jamaica, where Washington's first ambassador lived, and many others too numerous to mention. In such surroundings lived the poets Whitman and Bryant, and John Howard Payne's "Home, Sweet Home" was inspired by his boyhood dwelling at Easthampton. Indeed his sentiments are felt by thousands, for Long Island is today the land of homes, and realizes an opinion expressed in 1638—"it is worth naming as affording many accommodations."



Until recently it was thought that alfalfa could be successfully raised only in the West. Three crops annually have been raised on Long Island, with a yield of about five tons to the acre

The Small Farm and Its Possibilities on Long Island

THE NATURAL ADVANTAGES OF THE INTENSIVE METHODS AND SMALL ACREAGE—THE ISLAND'S OPPORTUNITIES IN VEGETABLES, FRUIT, ALFALFA, FLOWERS, BERRIES AND POULTRY

BY H. B. FULLERTON

Photographs by the author.

THE one-man, big acreage farm is rapidly sliding into the category of the antiques. It will soon rest upon the same shelf, in the museum of reminiscences of early customs and methods, with such things as the home soap-kettle, village tannery and the open-pan sugar refineries. We have the documents and columns of authentic figures from European sources to prove how overwhelmingly the thoroughly developed and persistently cultivated small acreage farm shows enormous advantages, both in crop yield and income return, over large acreage producing not one-tenth its possibilities.



For the man who is tired of the city pace, the Long Island farm of ten acres provides at least a respectable income, and an ideal life

During the last decade practical Americans have demonstrated the astounding crop values resulting from thorough and continuous cultivation and care on small acreage. Orchards of but ten acres, inspected daily by eyes trained by practice to detect the first sign of insect injury, of fungus development or of buds starting where limbs are undesirable — where spraying is done with businesslike and undeviating regularity, where pruning has been reduced to a science, where thinning of fruits has proven a wonderful dividend-yielder, where individual hand-picking is the only course pursued, where packing is done with mathematical pre-



There are great possibilities in raspberries and blackberries, for the demand at the present time far exceeds the supply



In peaches, apples, pears and plums there are splendid possibilities, particularly in combination with poultry

cision backed by undeviating honesty, where frequent shallow cultivation keeps the orchard as clean as a nature lover's flower bed and preserves for the use of the swelling fruits every atom of food, together with every drop of moisture with which the winter snows and spring rains have filled the ground—orchards such as these bear out the statement. All these modern methods have united to overwhelm the owner of the enormous orchards that receive at best but half the needed attention to the details which long ago were proven to pay in real bankable money.

Americans are beginning to learn that ten acres of alfalfa pay far better than forty of the best timothy that ever went down under the blades of the mowing-machine; that an acre of strawberries will yield annually a net profit twenty times as great as that garnered by the grain grower in the best season chance has brought him. So, too, the American is learning fast that quality pays far better than quantity, and further, that the maximum yield of any acre of any crop has not yet been reached; that a yield of one hundred bushels of potatoes to the acre can be, by common-sense practices, pushed to four hundred with but a fraction's increase in cost; and that methods proven correct in other mercantile pursuits and professions are equally valuable in agriculture.

Experimental farms, established in the "scrub-oak wastes" of the Long Island Sound shore and the "pine-barrens" of the central section, were started primarily to demonstrate the fact that the traditions and even the scientific statements which had held them as idle, unproductive acres for two centuries and a half were truly without reason or foundation of any description. This they proved in the year following their clearing, by the production of over three hundred varieties of plant life and by the expenditure of only $9.50 per acre. This was the cost of ten tons of barnyard manure, applied to secure the humus which was lacking because for generations forest fires had devoured the fallen leaves from tree and shrub. These experimental stations were in truth "demonstration farms," not only of the fact that both local wiseacre and scientific expert were entirely wrong regarding these acres but that there existed an unsupplied demand for high-quality, strictly fresh food in the great cities of New York and Brooklyn, as well as in the big towns and villages of Long Island, which fairly lap over each other on both Sound and Ocean shores. They have also proved that the agriculturalist's income can be made a continuous performance, and not one month, one week or even one day of the year need be left unproductive of revenue; and that, after the extremely long out-door open season of sea-water-surrounded Long Island, his glass coldframes alone, covered by double glass, will mature a great number of eagerly sought vegetable foods.

Ten acres has proven, time and time again, not only enough, but, with a tremendous variety of plants grown in demonstration of Long Island's capabilities, and for the selection of varieties best suited for Long Island's conditions—not only enough, but a superabundance of area to handle in a thoroughly business-like way. For example, it is difficult indeed to combine with tree and bush and vine fruits, vegetables maturing from spring until early winter. On the market garden or small farm of any individual grower, such a combination would be very rare, for individuality—a man's likes and dislikes—would quickly eliminate either the fruits or the vegetables for the more pleasing or desirable line to follow. On the other hand, the combination of fowl and fruit has proven most satisfactory. Mixed orchards of apples, peaches, pears and plums, in which chickens are allowed to run, have time and again proved wonderfully free from insect injury, and the fruits have shown the beneficial results secured by the thorough work done by



Long Island's level inland country, with its particularly deep soil and nearness to the big markets is a paradise for the truck gardener





The American is learning that quality pays better than quantity in market gardening, and that ten acres by intensive methods may be made to pay better than the one-man big-acreage farm

feathered insecticides, feathered cultivators and fertility producers. The gain is two-fold, for in helping the orchard the feathered end of the combination is keeping in prime condition and gathering its own food at the same time.

To those who find the greatest pleasure and profit in growing vegetables, the intensive crop system of Europe soon becomes second nature, for common sense alone is needed to show that four crops annually per acre are four times better than one, and that ten acres handled thus equal forty acres in yield and far excel larger acreage in income. Aside from the condensation of labor for all four propositions, oftentimes a single crop is wiped out by unfavorable conditions. That concentration in agriculture has precisely the same great value that this most excellent quality has in professional or mercantile life is assuredly a self-evident fact.

Limited acreage or the small farm need not by any means be looked upon as of value only as an intensive vegetable garden, for many are the possible combinations open and susceptible of development into sure producers of an extremely good living, of an eminently respectable income, or as high-class money-makers, in accord with the personal equation possessed by the owner and manipulator thereof.

Ten acres, for example, will be found a satisfactory plantation for the man or woman who loves flowers, and perhaps is especially attracted by the violet, aster, chrysanthemum, or the rose. On this limited number of acres can be garnered a vast yield of cut flowers, and to this extremely lucrative source of revenue can be added the growing of seed and of plants, for which there is an ever-unsupplied and constantly growing demand. This source of revenue does not end with the waning of the summer's warmth, but can be, and is, made a continuous performance throughout the entire year by the use of glass, whether in the form of high-class modern greenhouse structures, or the simple, and low-priced, coldframes.



Melons are at their best only when ripened on the vine and then rushed directly to the consumer

To Long Islanders there opens another most attractive profession—that of growing flowering bulbs, which is not only a promising, but a practical and proven highly successful line of work. For years we have personally planted bulbs coming from European sources, in the open, and found, without exception, that the particularly benign natural conditions belonging to Long Island, both in soil and climate, developed bulbs producing finer flowers, both in color and texture, than those obtained from foreign-grown specimens. This was true of many varieties of tulips, hyacinths, and members of the narcissus family. It is likewise true of cannas, gladiolii and lilies, and this line alone presents opportunties for a vast army of growers.

Another alluring profession is berry culture, and for this the small acreage will prove entirely satisfactory. Five acres of strawberries, with varieties so selected as to cover the full strawberry season, from extra early to very late, can, because its owner is enabled to cover every foot of it frequently and with careful scrutiny, because the owner is enabled to hold down within proper bounds the number of runners produced by each variety, because overhead irrigation can be cheaply installed so that moisture can be given when nature withholds this absolute necessity for the highest development and fullest production, produce this delectable and almost universally favored vine fruit to a high degree of excellence.

Raspberries are, at the present day, practically unattainable in the quantities for which they are yearned by either the classes or masses, and hence present a most enticing source of income.

Beyond the insipid and woefully unattractive, dull, purplish colored berry, commonly grown at the present day, few raspberries indeed can be found in even the best of our markets, yet selection

has, of late years, given growers a wide range from which to choose.

Black Caps, firm, delicious in flavor, and of positively enormous size when compared with the berry of half a generation ago, and there are red berries too, in every respect far superior to the variety usually found, and even yellow ones, brilliant in color, although not so lucious in flavor, yet, when mixed with either their black or red cousins, present a dish as attractive to the eye as to the palate. To tide over the short interim between the raspberry and the blackberry comes the dewberry, developed of late years from the low-growing, or vine blackberry. Far more delicate in flavor, far more juicy than the rampant-growing high-bush variety, is this little-known, attractive money-maker.



The man who has once raised and eaten his own garden vegetables will never again be satisfied with the kind that is picked when green, losing all its flavor in transit

Sweet corn, known to the city dweller only when he goes to the country for a vacation, will be in the near future shipped direct from the grower to the great hotels, restaurants, and boarding-houses of our cities, because its sugar is turned to starch long before the consumer can get his teeth into it. The demand for real sugar corn is great, and this demand can never be supplied until the interval between picking and eating is reduced to an extremely limited number of hours, even six causing a vast loss in sweetness and flavor.



With the aid of the hotbed and coldframe the season of crop production may be lengthened almost through the whole twelve months

Melons also offer a glorious chance. Ten acres of canteloupes will keep the most energetic grower busy indeed. Practically they are at their best only when ripened on the vine, and must be picked when ripe, the leeway either side being very slight. In th melon patch, as in the strawberry patch, a succession can be kept up by planting high-class varieties at different ripening seasons, from the very early summer until far into the winter. The Casaba melon has proven to be an easily grown and an easily kept melon, when grown upon Long Island as when grown in the far west.

Among other extremely profitable crops available for the man with small acreage are onions, egg-plant, tomatoes and cucumbers. They are all husky income-producers, and upon the experimental stations, both upon the heavier soil of the Sound Shore, and the lighter soil of the central section, once considered valueless, all have done splendidly.

So have the wonderfully productive Japanese plum orchards, and highly colored, highly flavored peaches and apples, and to these have been added grapes of many varieties, notably Niagara, Brighton, Delaware, Catawba, Worden and the well known Concord.

Our experiments have proven that alfalfa, which but a few short years ago was thought to be possible only in the West, grows on Long Island with the greatest luxuriance and full nutrient value. It has for centuries been known to prosper throughout Europe. Three cuttings annually is the record with us, with a yield of about five tons, and a selling value running up to $30 per ton when cut. Alfalfa has been easily established in every section of Long Island, and offers an extremely big-paying crop, for, once established, little care is required beyond the annual cuttings. Beyond its great value as a salable product of the soil, it is a fact that pork produced by it brings two cents a pound more than pork produced by either swill or corn. Cattle fed on it produce not only greater quantities of milk, but milk yielding more cream, hence butter. Chickens receiving it as part of their daily ration in summer or winter are impelled, because of their improved physical condition, to recover quickly from the moulting process and get busy laying eggs.



One of the Experimental Farms which a few years ago was acknowledged to be the most unpromising spot on Long Island

The transition stage has reached America, and we will, from this time forward, follow the lines of the older countries, giving up great areas and low crop production, to small areas and continuous heavy cropping. For some years to come, the West will continue great-acreage farming, but in the East, it is a thing of the past.



A typical view of Brightwaters, which South Shore community has a rather unusual combination of many trees and inland lakes and ponds. The upper end of the Venetian yacht harbor

The Commuter's Long Island

THE EXTENT OF THE ZONE IN WHICH COMMUTING IS PRACTICABLE—THE DIVERSITY OF COUNTRY TO BE FOUND WITHIN AN HOUR'S RIDE FROM NEW YORK

BY C. E. WHITTLESEY

THERE are several alleged jokes that have grown gray and threadbare in the using—the talkative barber, for instance, and the mother-in-law theme with its variations—but the quip that, beyond all the rest, has been worked overtime, until its piquancy and zest are like unto a glass of champagne that has stood overnight—that dean of all the old chestnuts is the commuter joke. One does not hear it so frequently these days, however, due perhaps to the fact that the rapidly dwindling number of non-commuters has almost reached zero.

Take Long Island, for instance. In the five years between 1903 and 1908 the number of commuters in that wonderful country doubled. In the next two years, 1909 and 1910, it doubled once more. If this rate of increase keeps up, Manhattan at night will soon resemble a deserted village. Last year the Long Island Railroad carried twenty-eight million passengers over a space of four hundred and seven millions of miles. But these figures are too overwhelming to be really significant. Of more interest to us is the fact that there were, in 1910, before the opening of the tunnels under the East River, about 17,500 people who went back and forth, day by day, between Manhattan and various points on the Island. With the statistics at hand it is easy enough to figure out how far out the average commuter goes, what it costs him for transportation, how long it takes him to get back and forth, and what advantages he has for his effort.



A house at Plandome that is a modern adaptation of Dutch Colonial

The average commuter on Long Island lives a trifle less than twenty-five miles out and reaches the new terminal in New York in about forty-five minutes. His commutation costs him about eight dollars a month. Following these figures out on the map of the Island it appears that our average commuter, if on the Oyster Bay branch, lives somewhere in the vicinity of East Williston; if on the main line his home is in Westbury; on the Montauk division he travels back and forth from, let us say, Baldwin. Both the Far Rockaway and Port Washington branches end inside of the average distance.

It is a difficult thing indeed to say just what constitutes the commuting zone on the Island. Roughly speaking, it extends fifty-six miles out on the Montauk division to Patchogue; on the main line, fifty miles to Ronkonkoma; while on the Wading River branch it includes Port Jefferson, which is fifty-nine miles from New York. This does not mean that this is the extreme limit of commuting, by any means, for there are men who travel each day from Southampton or even from Amagansett, which is one hundred and six miles out.

Another interesting comparison is between the number of commuters in winter and those in summer. To



From the high bluffs of Belle Terre there is a splendid view over Long Island Sound



The name Woodmere has become closely associated with this most attractive development of the American farmhouse



The home of Mrs. Russell Sage is one of the landmarks of Sag Harbor

Patchogue, for instance, the number more than doubles in the summer; to Hicksville and most of the points inside of the average commuter's distance it remains nearly stationary. Far Rockaway had twenty-one hundred commuters in the month of August last summer, and although it is usually considered a summer resort there were six hundred and thirty commuters in January of this year.

The answer to the question "What does the commuter find on Long Island in return for his effort in traveling back and forth?" requires a very long answer. There is a variety in the character and appearances of the many suburban communities that is found probably in no other portion, covering the same area, of the United States.

If the commuter takes the main line he will pass through the group of towns near the city and reach Richmond Hill, extending along the hillside of what is now Forest Hill Park of the Borough of Brooklyn. Adjoining this on the south lies Morris Park which has been developed by the railroad division running through Brooklyn to downtown New York. Jamaica, lying just beyond, ten miles from New York, is the center of the railroad system. From the west two tracks of the Atlantic division to Brooklyn are equipped with electric train service. From the west also, four tracks from Long Island City carry through trains to all parts of the Island proper. Four tracks extend eastward from Jamaica, the two northerly reaching the North Shore and central points; the southerly pair carrying the traffic of the South Side or main line to Montauk or Sag Harbor. Just east of Jamaica lie Hollis, Queens and Floral Park, the first of which is twelve miles out, while Floral Park is fifteen. Just beyond lies Garden City, eighteen miles from New York and one of the most attractive inland communities on the Island. With its Cathedral, its large and well known hotel and the two famous schools, St. Mary's for girls and St. Paul's for boys, its golf club and its magnificent tree-shaded streets, it has naturally been built up with many of the most attractive modern homes to be found on the Island.



The gate lodge and entrance to the estate of W. Bourke Cochran at Wampage



The yacht that carries commuters from Bay Shore to Saltaire on the western end of Fire Island



Lake Winganhauppauge at Islip is a reminder of the Indian days

Hempstead lies just beyond, twenty miles out, and is particularly attractive on account of its Revolutionary associations, while nearby on the Hempstead Plains is the Meadowbrook Hunt Club. Beyond Queens, on the straight line from which a spur branches off towards Garden City, lies New Hyde Park, bordering Hempstead Plains. Farther on is Mineola, the county seat of Nassau County and widely known for its Fair Grounds. Just beyond lies Westbury, the center of many beautiful estates. Hicksville is twenty-five miles out and one of the famous one-street villages. From here the Wading



One of the new houses at Kensington—another adaptation of the Dutch Colonial to modern needs. Forman & Light, architects



An old Wantagh homestead that has been remodeled. Pettit & Green, architects



The Mochrie home at Waldheim, Flushing. G. S. Appleton, architect

River line branches off, at the junction of the two branches of a Y, the upper one leading to Wading River, the lower one continuing out through the middle of the Island to Greenport. Near Hicksville lies old Jericho, at the end of the Jericho Pike, the famous automobile thoroughfare, that is so often a solid line of cars.



An interesting type of cement bungalow at Huntington Terrace. J. S. Conkling, architect

Continuing along the Wading River branch we come to Syosset, Cold Spring and Huntington, where the character of the country changes rapidly from the level and low rolling plains to the wooded hills and quiet valleys that slope down to the large group of inlets and harbors in the vicinity of Oyster Bay and Huntington Bay. The railroad here passes along the ridge some distance back from the Sound, and each village on the road lies well away from its station down towards the water. Huntington is one of the oldest towns on the Island, resembling very closely many of the old New England towns whose wide streets are arched by elms. It comprises in reality three necks of land surrounding Huntington Bay—West Neck, East Neck and Middle Neck. On the second of these is the Chateau des Beaux Arts, the objective point of many automobile trips out from Manhattan.



Curved driveways and irregular shaped plots are a feature of Great Neck Villa



Two new houses at Great Neck Villa



At Garden City, a beautiful inland community

Returning to the railroad, beyond Huntington lie Green Lawn, Northport, Kings Park, Smithtown, St. James, Stony Brook, Setauket and Port Jefferson. Each of these enjoys wonderful natural advantages in the magnificent view across Smithtown Bay and the Sound, with the Connecticut shore in the distance. Port Jefferson was a shipbuilding and outfitting port at a time when yachts were unknown. It is today one of the most popular ports for small craft along the Sound. There is space but to mention a few of the attractive towns beyond—Miller's Place, Rocky Point, Shoreham and Wading River.

The North Shore of Long Island is at the western end almost as different from the South Shore as one nation is from another. Steep wooded highlands project out into the Sound and shelter seven great bays. Elmhurst, formerly Newtown, lies nearest the western end, with Corona just beyond—only six miles from New York. Flushing comes next, fortunate in having two stations, one on either branch. On the northerly of the two lines lies College Point, with an outlook across Flushing Bay. Whitestone and Whitestone Landing, where the branch ends, lie at the junction of the East River and Long Island Sound. On the other branch lie Murray Hill and Broadway, outlying sections of Flushing where the moderate-size type of home has been built in great numbers. Beyond lies Little

(*Continued on page* 188)



The new Cafe des Beaux-Arts, at Huntington, is the mecca of automobile parties



A most attractive bungalow in "The Pines," Brightwaters—one of the three distinct sections of that community

Outdoor Life on Long Island

WHAT THE ISLAND OFFERS THE SPORTSMAN AND LOVER OF THE OPEN—YACHTING, HUNTING, FISHING, GOLF, TENNIS, MOTOR BOATING, BATHING, POLO, CRICKET, ICE-BOATING, MOTORING

BY ARTHUR W. DEAN

IF you want to hunt the white rhinoceros on Long Island you'll have to wait a little while; the local St. Hubert hasn't started his preserve yet—but if it's hunting you want, come out next fall and learn what real battery or sneak-box shooting is like. Most any place along the South Bay will do—or out at Montauk, or even to the city line. There are twenty-nine species of ducks and geese, thirty of snipe, eight of plover, three of partridge, and they've even bagged pelican, so you ought to get something. Perhaps some of those Canadian geese will be flying by if you've got a "honker" tethered among the decoys, so wait until you see what looks like an ostrich at the end of your gun and then let go! The feeling may be something the same as they felt on top of Bunker Hill waiting for the whites of the enemies eyes, but you must get him! I may come in at the eating, and it's great! If you're too delicate to lie in the cold battery try those snipe; they're scattered all along the North and South shores, and a day's sport is waiting for you there.



The stiff breeze which is never lacking on the South Shore makes it a paradise for small boats

Perhaps your blood needs the stir of exercise; then go to that deserted stretch of middle island with that dog of yours. You'll not go far before the clear "bob white" will set you a tingle, or further on your heart will stop altogether as a big brown partridge whirs from cover. And rabbits, too—you can't fail to see that little white flag flying behind a bunch of brown fur, sometime between November 1st and December 31st. You have an added month for ducks and geese, as you can start in October. For quail and partridge there is but November, and deer—yes, deer; they really do get them here on the first two Wednesdays and the first two Fridays after the first Tuesday in November.

If this isn't your style of hunting, and the baying of hounds, the flash of red coats, a blue sky above you and a good horse beneath, seems your ideal sport, there is the old Meadow Brook Club, with its famous hounds to run over the Hempstead meadows, or the Rockaway Hunt at Cedarhurst, or yet the Piping Rock Club, Locust Valley.

But if you are one of Isaac Walton's brethren, ready to convince with fine logic that your sport is best, why go to Nova Scotia or the north woods, when along all the south side are good trout brooks? I'd tell you one in particular, but it's a secret, and then it's much more sport to discover it yourself. There are pools and good casting brooks near Oyster Bay, Smithtown or Wading River, and the Cold Spring Hatchery keeps them stocked; besides, the angling sense will lead you to many a little stream all the way out to Southampton on the South Shore, and there you're sure to have luck. Then there is Ronkonkoma Lake for bass, pickerel and perch—big ones, too.

Long Island has a greater distribution of fish than any other part of the State, and there are few kinds of game fishes not found in her waters. Those who prefer the marine fish can get plenty of excitement in the South Bay. Take Bay Shore, for instance, with a bayman to grind "chum," and the blues running well, you can take fifty or sixty in no time. When you get tired there is the alternative of going deep for flounders, or "jigging" for weakfish. If you're not satisfied then, go out to the inlet and troll for the big fellows, or up near the wrecks and get bass and blackfish. The ocean beaches also, and



Up hill and down dale, by bay and ocean, the game of golf finds no better setting than at Shinnecock Hills. The turf is fine enough here to arouse even a Scotchman's enthusiasum



Putting out the decoys in anticipation of a big day's duck shooting on the bay



The beach at East Hampton is only one of many affording perfect ocean bathing

the Sound Shore all have their quota of enthusiasts whose stories will go without discounting.

Those who can't sniff the salt breeze without feeling around for a tiller will find their sport either in the South Bay or the Sound. Almost any week-end finds the Bay one series of races from Westhampton to Freeport. All classes of small boats, larks, cats and the neat one-design boats are here to supply a choice for the yachtsman. A lazy cruise in a cat makes a good vacation spent along the Bay, with the extra inducement of one of those Long Island "shore dinners"! The Sound is for larger boats, and the yacht club cruises work along with the possibilities for visits at the numerous yacht clubs in the attractive harbors along the way. There is racing, too, especially of the more formal type. In the waters of Shelter Island, Gardiner's Bay, and the Peconics, a combination of all the other styles of yachting is to be had. The motorboat cuts an important figure in regattas, and it is understood that this exhilarating form of racing will have its most important events in all of the harbors of the North Shore. Nor need winter cool your sailing ardor; just hitch yourself to one of those comets, called an ice-boat or a scooter, and when you regain your breath you will have found one argument for winter.



Picking up the scent. Hunting after the hounds is one of Long Island's many opportunities for out-door recreation

Surely the sportsman's delight in rivalry finds no better opportunity than in the games which can be played on Long Island. Followers of the "royal and ancient game" find golf links equal to the finest in the land. At Garden City under the care of Scotch experts a wonderful course has resulted. Shinnecock embodies the features of St. Andrew's, and the play is part by ocean and part overlooking the bay, up and down the rolling dunes which make such ideal golfing country. There must be four-score links on the Island, most of them excellent, many of them near—Forest Park is at Jamaica. The Long Island soil seems to *grow* tennis courts, which are attractive in the proximity of good bathing facilities either in ocean, bay or sound. Few sections have the quality of surf bathing that is found here—or the choice of still or rough salt water. Polo and cricket are much in vogue at the country clubs, and baseball too is a source of friendly rivalry in summer.

When the question of "where shall we go today?" arises, take your car out on Long Island. Leave the guidebook and map at home, and just go—the roads are excellent and you can strike no bad ones wherever you run. The long Merrick Boulevard, running into the South Country Road, extends nearly the entire length of the Island through varied and beautiful scenery and



The courts in front of the Woodmere Club are fast enough for the most proficient player



If you wish to talk conformation or points with the cognoscenti go to the Bayshore horse show



The Westbury turn. One of the most exciting points on the Vanderbilt Cup course



Polo at Wampage always draws a crowd of those who choose to enjoy their sport vicariously

past many historical places and old homesteads well worth a visit. Take your time, stop off and enjoy the Island's unlimited opportunity for sport. If you wish to try what that new motor car can do, there is the Motor Parkway where no speed limit can check you on the concrete and macadam road that is an engineering wonder.

The Vanderbilt Cup Race is run partly over this course, and on the night preceding the much-heralded event, thousands of enthusiastic motorists crowd the roads leading to it. It is a remarkable sight to see the continuous stream of shining headlights all hurrying toward the course. Some stop at the hotels in Garden City or the vicinity, but the greater number make themselves comfortable in their machines until dawn. At the first light the racers are away belching fire and roaring, their juggernaut drivers seeming inhabitants of some other strange planet with their weird helmets and staring eyes. The race itself is tremendously exciting as the cars swoop by at a rate fast enough to make the most chronic speeder gasp.



The motor boat race is now a permanent feature of Long Island regattas and finds no better water for making good performances. All the big races are scheduled here for next season



Winter does not end the yachting season on Long Island. Then the "scooters" or iceboats make other sailing seem tame in comparison

Since the favorite sport of kings has become the game of lobbyists, horse-racing is not carried on to the extent it was formerly, and aviation provides an excellent substitute at Belmont Park. Horse lovers, however, can see some really creditable performances at the various country fairs, and the Bayshore Horse Show brings as fine an exhibition of quality as can be seen anywhere.

"Perpetual devotion to what a man calls his business is only sustained by perpetual neglect of many other things, and it is not by any means certain that a man's business is the most important thing he has to do." If you agree with Stevenson that the great outdoors has a claim upon your time, you can find no better place for recreation than upon Long Island.



The South Country Road is one of Long Island's ideal boulevards, which make it the most logical place for the motorist



Drop by that riffle, and if you don't land a speckled beauty your skill is lacking or you have the wrong fly



THE GLOWING GARDEN OF THE METROPOLIS

¶ PUBLIC-SPIRITED CITIZENS who have no property interests to be subserved by such declarations, and students of sociology who decry the overcrowded state of Manhattan as a condition that retards the development of citizenship, have been pointing for many years to the wide expanses of Long Island as a place for residence. So far as location, soil and topography are concerned, Long Island is one of the most convenient and healthful places of residence in the eastern part of the United States. It is about 122 miles long by 15 to 18 miles wide, with a coast line of over 400 miles, and containing over 1,000,000 acres of land. Because of its fine water supply, available anywhere by driving wells through the gravel soil, and its position, like a great arm reaching out into the Atlantic Ocean, with natural drainage, it is peculiarly fitted for cultivation and residence. Its population has more than doubled within twenty years, and is now increasing much faster than in the past. Its two western counties are within the city limits of New York, and comprise more than one-half the area of that city. It is thus intimately allied with an urban population in and near New York of over 4,000,000 people, and in any estimate of the future of Long Island, the presence of this great city, growing at an average rate of more than 130,000 persons yearly, must be considered as of first importance. In the rapid growth of this city the most available place for expansion is on Long Island.

¶ There is room on this great island, however, for hundreds of thousands of men who are looking for a place where they can live in independence away from the crowded tenements, and yet be accessible to the city.

¶ With the improved transit facilities, business men are able to spend the day at their place of business in Manhattan or Brooklyn, and their nights and holidays on the seacoast or on the shores of the Sound.

¶ To the east of Brooklyn, outside of the closely populated districts, there is today a succession of neat communities that are growing rapidly into towns of considerable size. These little towns are being improved, and well equipped with all the advantages a growing town should have—churches and schools—and in many places libraries are being founded.

¶ Another inducement offered by Long Island as an ideal homeland is the excellence of its neighbors. The old residents of the Island are descendants of the early English settlers, and retain the sterling qualities of their ancestry. Not only health and good neighbors, but amusements, predominate on Long Island. Chief of these is golf. Nowhere in the country are there so many golf courses, many of which are celebrated—their accessibility makes them especially attractive.

¶ For accessibility Long Island is fortunate, for it has many means of access. The Pennsylvania Railroad tunnels, under the East River, from 32nd Street and 7th Avenue, the center of activities in Manhattan, are of immense interest to the homeseeker, to whom the question of accessibility is important. These tubes of steel, connecting Manhattan with Long Island, give direct service from New York to any point on Long Island, as well as furnishing a direct connection (via Pennsylvania Railroad) for points South or West. In addition to these tunnels Long Island has other means of access from New York by way of bridges, ferries, and the Interborough Subway, the trains of which connect with the Long Island Railroad in Brooklyn, at Flatbush Avenue Station.

¶ For specific information concerning Long Island, address the General Passenger Agent, Long Island Railroad, Pennsylvania Station, New York.



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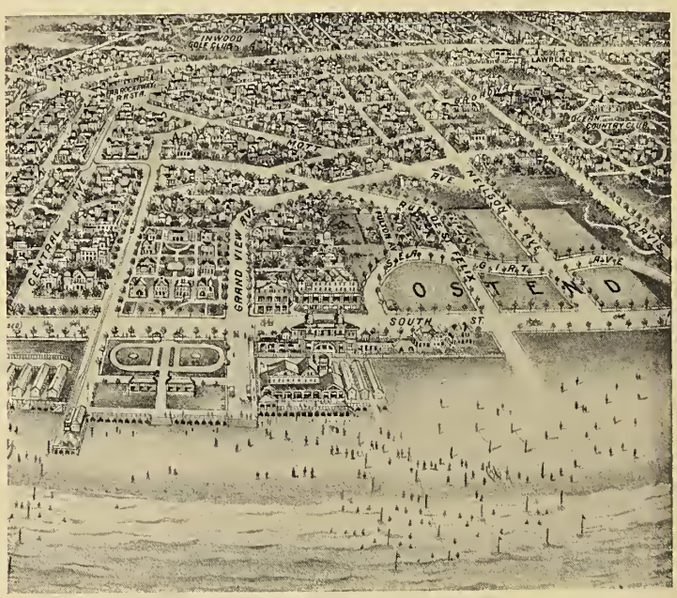
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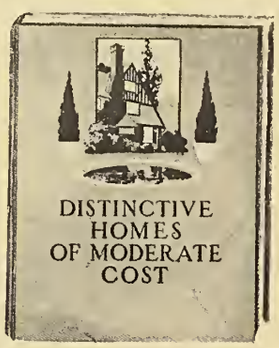
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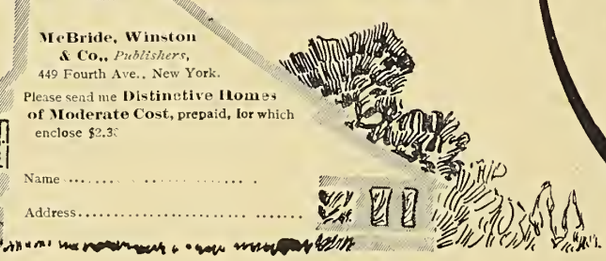
¶ The carefully selected contents include country homes, seashores cottages, alluring bungalows, inexpensively remodeled farmhouses, etc. All the desirable architectural styles are represented: Colonial, English Half-timber, Stucco, Cement, Dutch Colonial (the gambrel roof type), Swiss Chalet, etc. Chapters written by authorities cover all sides of the fascinating problem of house-building, interior decoration and furnishing. The relations between the home-builder and his architect, the matter of plans, specifications, contracts, the puzzling problem of extras and how to avoid them—all these subjects are clarified in a most comprehensive and interesting way. Throughout the text are many pages of pictures illustrating constructive, decorative and furnishing details—entrance doorways, bay windows, outside shutters, chimneys, stairways, dormer windows, built-in china-cupboards, consistently furnished interiors, porches—all grouped so that the reader may, at a glance, compare all the best types.

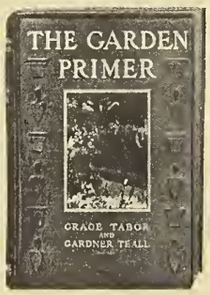


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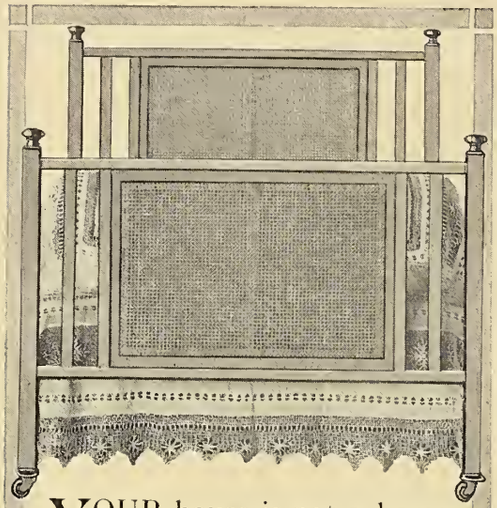
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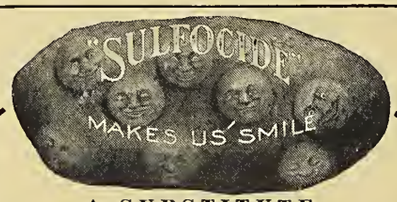
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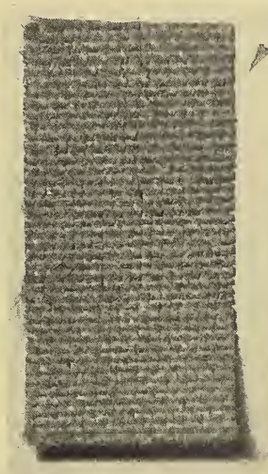
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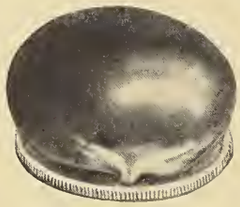
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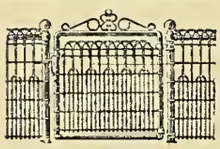
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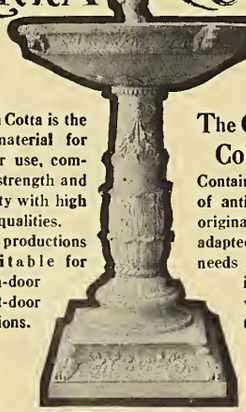
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A decanter with festoon engraving, one of the features which assist in determining its date

to antique lovers, for most of the relics of former times are beautiful enough to demand instant appreciation.

Of foreign pieces to be found in collections on this side of the water, the greater number are of English make. There are extant in England three specimens of the Elizabethan period, but American collectors have little to do with glassware of the seventeenth or even the first part of the eighteenth century. During the latter half of the eighteenth century, however,



Two interesting pieces from the Paget collection. The pitcher is unusual for the raised oblong decorations

when the seaport towns of New England were at the height of their maritime career, the sea captains brought home from every voyage all kinds of foreign treasures; and the glassware used for "best" almost always came from abroad.

In those old days, Salem, Massachusetts, was not behind her sister towns in enterprise; her ships were on every sea; so that today, the descendants of those hardy voyagers are the possessors of sets and pieces of old glass which are probably unexcelled in the United States.

(*Continued on page 230.*)



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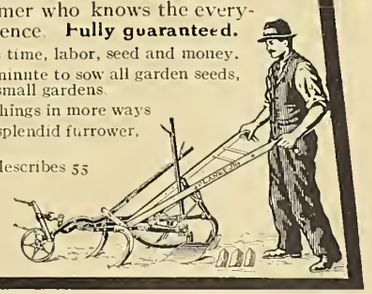
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MONTROSE Westchester Co., N. Y.



Branch Offices and Warehouses at
Boston New York Chicago
Philadelphia and San Francisco

(*Continued on page 228.*)

The styles in glassware designs are not marked off into periods, and it is difficult to place their age or determine their authenticity. No stem cutting was done, however, before 1780, and cutting was not general till after 1800, so that is at least one guide. Since so little data is available and with no distinguishing marks or stamp of genuineness, the best way to find out if your specimen is authentic is to compare it with some of known history and about which there can be no doubt—for this illustrations of glasses from Salem collections are of great value.



A liquor set in the Atkinson collection. The quadruple decanter is really four bottles fitted together

It was during the eighteenth century that "wine was probably brought to the table in the well-known big-bellied black bottle, with its impressed seal, and later, when decanters or clear glass came into fashion, they were quite unassuming and simple in form." Later still, decanters became globular in shape, but as they existed only for a short time, specimens



Two English-made decanters with silver "coasters" and a set of glasses to match

today are rare. The date of these is gauged by the festoons of the engravings. Still later specimens bore initials and emblems; one in Mr. Bate's collection has "T. M. B." on one side and an engraved shuttle and shears on the other, which seems to identify this piece with some old weaver who was proud of his trade. An interesting type is shown of the decanter with the silver coaster.

The decanter with festoon engraving is similar in shape and design to one owned by Mr. Bate, and belonging orig-

(*Continued on page 232.*)

Boston Garter

Velvet Grip



is highest grade—not only fits the leg, but will wear well in every part—the "Velvet Grip" clasp stays in place until released.

See that BOSTON GARTER is stamped on the clasp.

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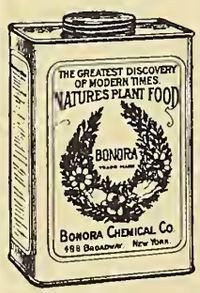
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Satisfaction guaranteed or money refunded.

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(*Continued from page 230.*)

inally to Bishop Potter. In this same collection is a glass goblet which was a part of the wedding outfit of Mrs. Page's grandmother in 1804. Mrs. Page's pitcher has a curious decoration, consisting of oblong protuberances arranged in rows around the body. Surely it was such lovely old ware as this which tempted and overcame one collector until her family complained of the size of her collection, since it forced them to eat their soup from pitchers!

A quadruple decanter is an extremely interesting part of a collection. Its compartments are lettered "Brandy," etc., so that in those days when cake and liquors formed a proper refreshment even for the pastor, it was perhaps easier to keep one's head and liquor straight.

Miss Grace Atkinson has many fine pieces of old glass, and among them is the liquor case shown above. The bottles are gilt, and a glass tray is in the slide at the front; the set also contains two exquisitely cut wine-glasses decorated in gilt. The box is of mahogany bound with brass; stands ten inches high; and is lined with pink silk. This whole set came from Marblehead.

The Bee Disease

THE United States Department of Agriculture estimates that the annual honey crop is worth twenty millions of dollars. As the industry of bee keeping is capable of extension there are vast opportunities of increasing this output. There is a difficulty to be encountered, however, which is a severe check to the business, causing loss of crop and weakened and destroyed colonies. This is the bee disease.

Experiment has discovered that bees are subject to a bacterial disease which attacks the developing brood. As the adult bees die their progeny become weakened, their numbers depleted and eventually wiped out. Robber bees entering the hive to steal the honey, carry the infection. The disease can easily be controlled, but the majority of beekeepers are unaware of the existence and nature of the trouble. To protect healthy apiaries and assist the ignorant, the Government has organized a corps of inspectors. Supplementary work is done by the issuance of pamphlets which may be had on request from the Department of Agriculture. These not only tell corrective methods and treatment but enable owners to protect their stock from the ravages of others.

Fruit

IF your pruning was not all completed by the last part of February, be sure to finish it now. This is the very last opportunity for there will be no time next month. If you are thinking of setting out any fruits let this serve as a reminder that this is the time to be about it.

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Infant plants as well as infant children must have proper nourishment.

In either instance the underfed droop, dwarf and often die.

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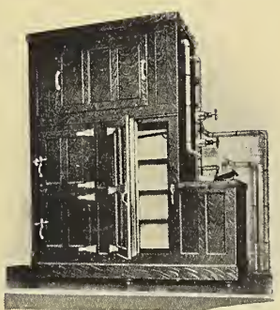
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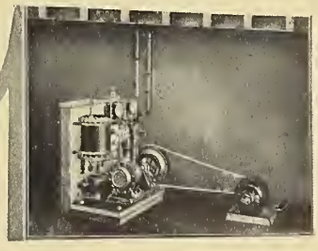
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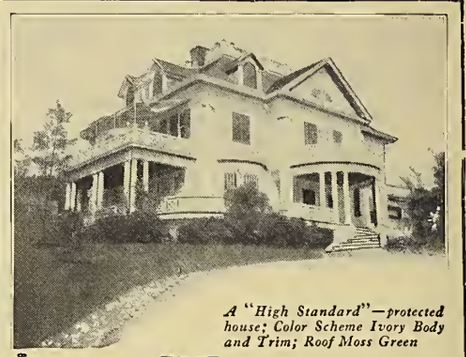
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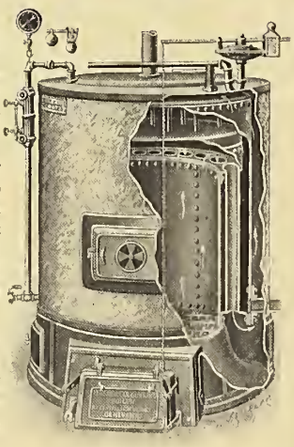
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CONTENTS:

THE NATIONAL FORESTS by Agnes C. Laut.

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THE WENDS AND THEIR HOME IN THE MARK by Wm. Mayner.

In what was once a great swampy forest outside Berlin live the Wends whose ancient customs, quaint dress and manners are practically unknown to the traveling public. This makes a most appealing article.

SPANISH TOWN by Sarah Leyburn Coe.

This old capital of Jamaica with its palm trees and semi-tropical atmosphere is woven into a short, but vivid, picture of an interesting land.

TWO SUMMER DAYS IN ALGERIA by Blanche MacManus.

The charm of Algeria in the summertime might be considered a negligible quantity but Miss MacManus shows that though the sun burns hot, two summer days in the cooling Mediterranean breezes may be delightful.

TINY PALESTINE by Lewis Gaston Leary.

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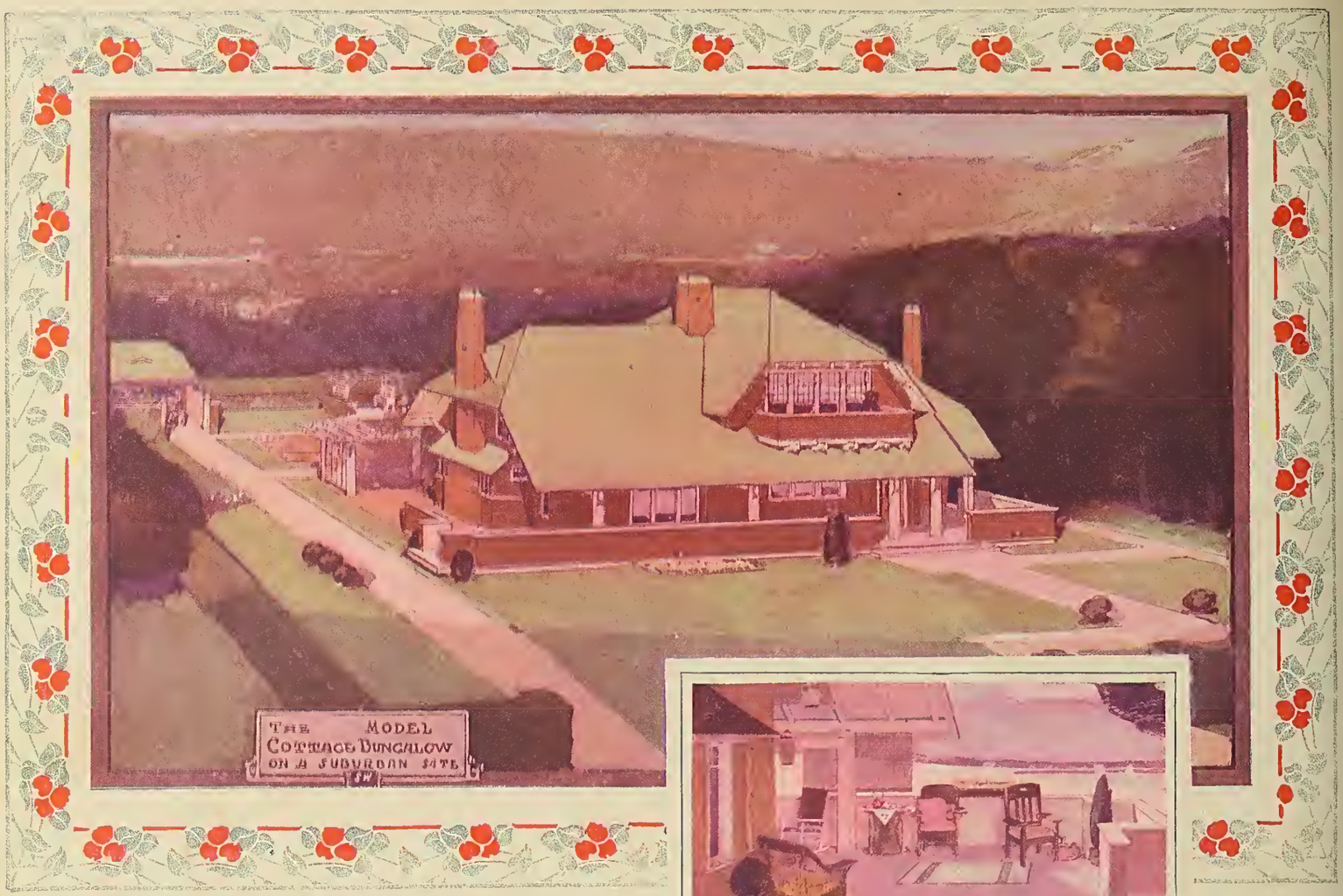
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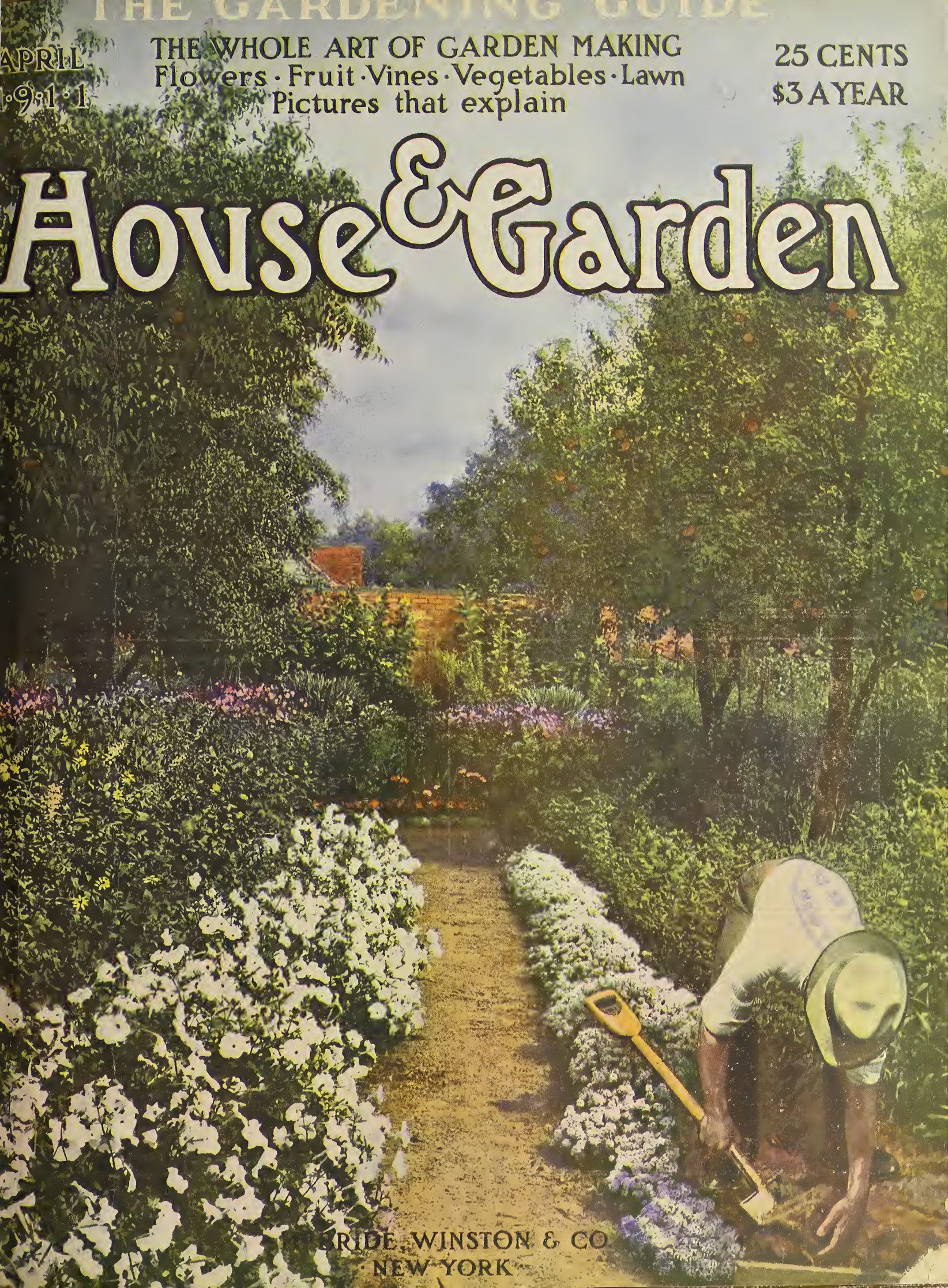
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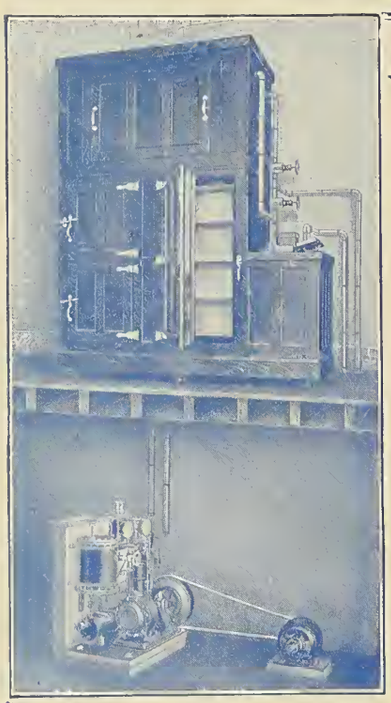
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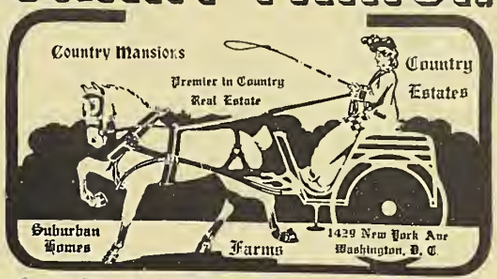
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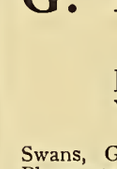
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If there is one word of advice that should be sounded with more emphasis than another it is: "Do not hatch your chickens too early." The eggs during early spring are apt to be less fertile and more chicks will be lost by disease and exposure than later in the season. Then, too, it will be found that only the strongest survive and these will invariably prove to be cockerels.

Early hatched chicks are more expensive, in that green and animal food must be provided, while Nature supplies these two essentials later in the season. If eggs are purchased they cost more earlier in the season. The pullets coming to maturity before the fall molt takes place have to undergo this drawback and if they commence to lay during the fall they are apt to stop entirely during the winter months.

Of course, a few chicks may be hatched early if one desires fully developed birds for the fall shows or a few choice breeders both male and female, though yearling or two year old females make better breeders than early hatched pullets, but an early hatched cockerel, if fully grown, is fully as good as an older male for breeding purposes.

April and May are the ideal months in which to hatch chickens. Let them start with the grass. With the season far enough advanced to allow the chickens range upon land where natural food abounds, the best growth is possible. The best winter layers are hatched during these months, as well as most of the prize winners at the large winter poultry shows throughout the country. There are fewer losses and a less number of cases of stunted growth than is often apparent among early hatched chicks.

At this season of the year vegetation is starting up with a newness of life; the birds have returned and are building their nests and getting ready to rear their young; the sun is getting higher every day and is sending a larger amount of warmth to the earth's surface which is covered with tender blades of grass, and with the increasing warmth the ground begins to teem, and the air is full of insect life. Surely this is the time Nature set for hatching the chickens. A. G. S.

Poultry Runs

One of the most important things in poultry raising is to have proper runs. It is a mistaken idea that the best land for poultry is the poorest land that lies out doors, an acre of which will not produce enough hay to keep a goat alive. Hens and chickens require grass, and lots of it. An acre of good grass land is necessary for every one hundred adult fowls. A poultry plant requires just as good soil as a dairy farm. No wonder so many people fail in the hen business when they erect their buildings upon sand. Better locate the plant upon a rocky farm, for where there are rocks, good soil is sure to be

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Runs in slashes or bush pieces are especially good for growing stock. Chickens lay underneath low bushes while resting and they are better protected from hawks if there are bushes under which they can hide. Bugs and insects galore are found around old stumps where the original growth has been cut off and patches of grass and clover here and there furnish a bountiful supply of green food.

An apple orchard is perhaps the best run for poultry in any stage of life. Plenty of grass, shade, bees, flies, moths, worms, and various kinds of insect life are ever present. The early and fall apples, when ripe, are good for fowls and are heartily devoured by them. A fruit orchard of any kind is likewise beneficial to poultry and makes an ideal run.

A heavy growth of wood or timber furnishes an excellent working place for the hens, especially in hot weather, leaves and pine needles have many kinds of insects lurking under them and the hens enjoy raking them over for the choice morsels they will discover. Also a run one-half covered with grass, the other half planted to corn, makes a good combination, green food from the grass land, animal food and shade from the corn piece.

Chickens may be allowed free range in grass, growing oats, potatoes, corn, and garden stuff, with great benefit not only to them, but also to the crops. Free range for poultry is the inexorable law of Nature. Confinement is an artificial condition. Poultry left to themselves will not often frequent sandy land on sand banks unless to dust themselves. Hens given their freedom are much better able to satisfy their wants and supply their needs than in confinement.

In parts of the country where foxes abound or other animals destructive to poultry, it is necessary in order to be on the safe side to enclose one's farm or poultry range with a wire fence having the mesh fine enough to keep out all intruders and the fence tight at the bottom and at least four feet in height. If no fence is put up one might not be troubled for several years, and then have so severe a blow struck that to rally from it would cost a season's work.

Whatever runs are used for poultry let them be productive, not sterile, of an abundance of green and animal food, with

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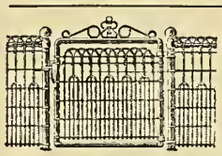
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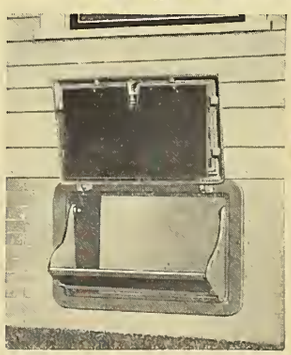
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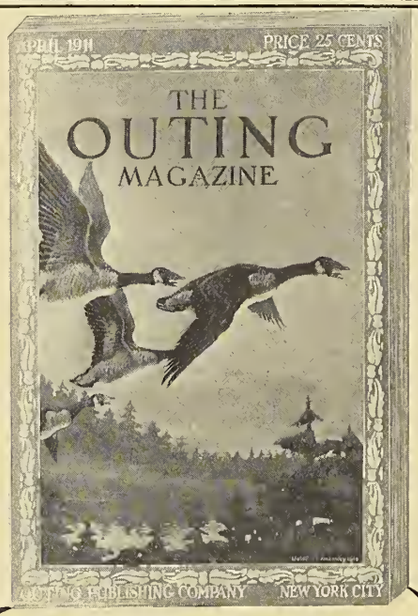




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plenty of shade, and, if confinement in yards is necessary, make them approach natural conditions as near as possible.

A. G. S.

Prevention of Fleas

IN relation to the ubiquitous flea, in M. L. K.'s letter, perhaps a few preventives would be of assistance. When my Lady Babbie—a beautiful Scotch collie, was to have her puppies, the foundation of her bed was mainly pine shavings, and over these I sprinkled oil of eucalyptus. In renewing the shavings the oil was never forgotten. It is a good germicide also, and its pungent odor is not unpleasing. For kennel raised dogs, common moth balls, scattered liberally about, and air slaked lime, are good. In washing my dogs, I always put in the rinsing water a liberal dash of creosol or lysol. This also is a good preventive of skin troubles. Fleas dislike it exceedingly. My dogs are never troubled with fleas, and their coats are marvels. In the case of the mother and puppies, they do not know what a flea is.

E. M.

Notes for Southern Gardens

I HAVE grown from seeds a new European Asparagus named "Robustus." Contrary to expectations, the seeds germinated in a few weeks. The leaf is more nearly double than "Plumosus," though very lace-like—and is surely a more beautiful plant. It is of rapid growth and far more robust habit than other varieties. In many sections of California it grows outside, growing very tall, and making a beautiful porch vine. Many people look upon the varieties of Asparagus as something very tender and only to be carefully sheltered. Planted against a south porch or out, away from the wall, so long as they have the house as a shield, there is little fear of them freezing, even though the winter is a severe one. I've been told by people who are growing fine specimens, that the one secret of success is never to move them—that is, not to shift them from place to place. I've seen them in East windows, as perfect as in South windows—they are not so exacting as to place—if only kept in one place.

DAHLIAS IN CALIFORNIA

THIS has been my first season of Dahlia culture, and I believe the experience may serve for many who are planning to grow them another spring. In securing a start of bulbs in the early spring, I was advised to put them right in the ground—which was done. Plants soon started up, and were blooming in July. The first thing I realized, was the brittleness of the stems, which snapped at a touch. The blooms were disappointing too; inferior in form and size. Then came the dahlia pest, resembling the lady bug—which ate up the blossoms as fast as they opened, and riddled first the buds and then the foliage. So many branches had broken that the whole row looked ragged, so I cut the plants back, nearly

to the ground. The roots grew next to a row of callas, otherwise they might not have had water. As it was, they started up again, growing with a vigor and vim which soon brought them into stalky bushes. They started blooming along in August and they've surely been a whole garden in themselves. From few over a dozen plants we've had armsfull of bloom. When there's no attempt at disbudding, of course one can do more lavish cutting. The flowers were large enough for beauty, perfectly formed and strong stemmed. In the meantime, too, the "bug" had his turn of disgust at the ways of the gardener, and left with his family for other parts.

A real dahlia man would have told me at the start what I've been told since, that it's a great mistake to plant the dahlias early in the spring. The end of June is not too late. He says it is a fall flower, and when planted early is forced to bloom in the hot season, which will surely mean inferior flowers. Also that the insect, which he names "Diabrotica," will not trouble them in their regular season—in fact, will not be around at all. At any rate I'm glad my plants finally succeeded, for about the midde of the summer I would have given away some very fine varities to the first bidder; now any disgruntled experimenter may pass his collection on to me. Another season I plan to do some disbudding and grow a few dinner plates—though for real everyday enjoyment the natural size, with perfect flowers and lavish yield is good enough. This bug pest may be native to California, as I've never read of it in any of the garden publications. I hear some people say that in California it is unnecessary to take up dahlia bulbs in the fall, as they are perfectly hardy. It surely saves the bother of storing away if left in the ground till spring. They then can be taken up and separated, and the ground thoroughly cultivated and fertilized before replanting. Good soil, room to grow and plenty of water, with late planting, are their easily met requirements. E. S.

Rhubarb from Seed

THE better kinds of rhubarb are so superior to the old kinds that are being grown in a great many of the home gardens, that it will pay one to buy a packet of seed, which costs only five cents, and grow the roots. They will grow in one year from the seed to the right size for setting in the row where wanted. The only popular variety that I know of which is worth planting is Myatt's Victoria. The roots of this variety may be obtained from some seedsmen for five to eight dollars a hundred, but they are such as you could raise from seed in your own garden in one season. The seed should be sown in drills in the spring, and thinned to give them plenty of room. A five-cent packet contains sufficient seed to raise a hundred roots, allowing for thinning.

H. F. G.

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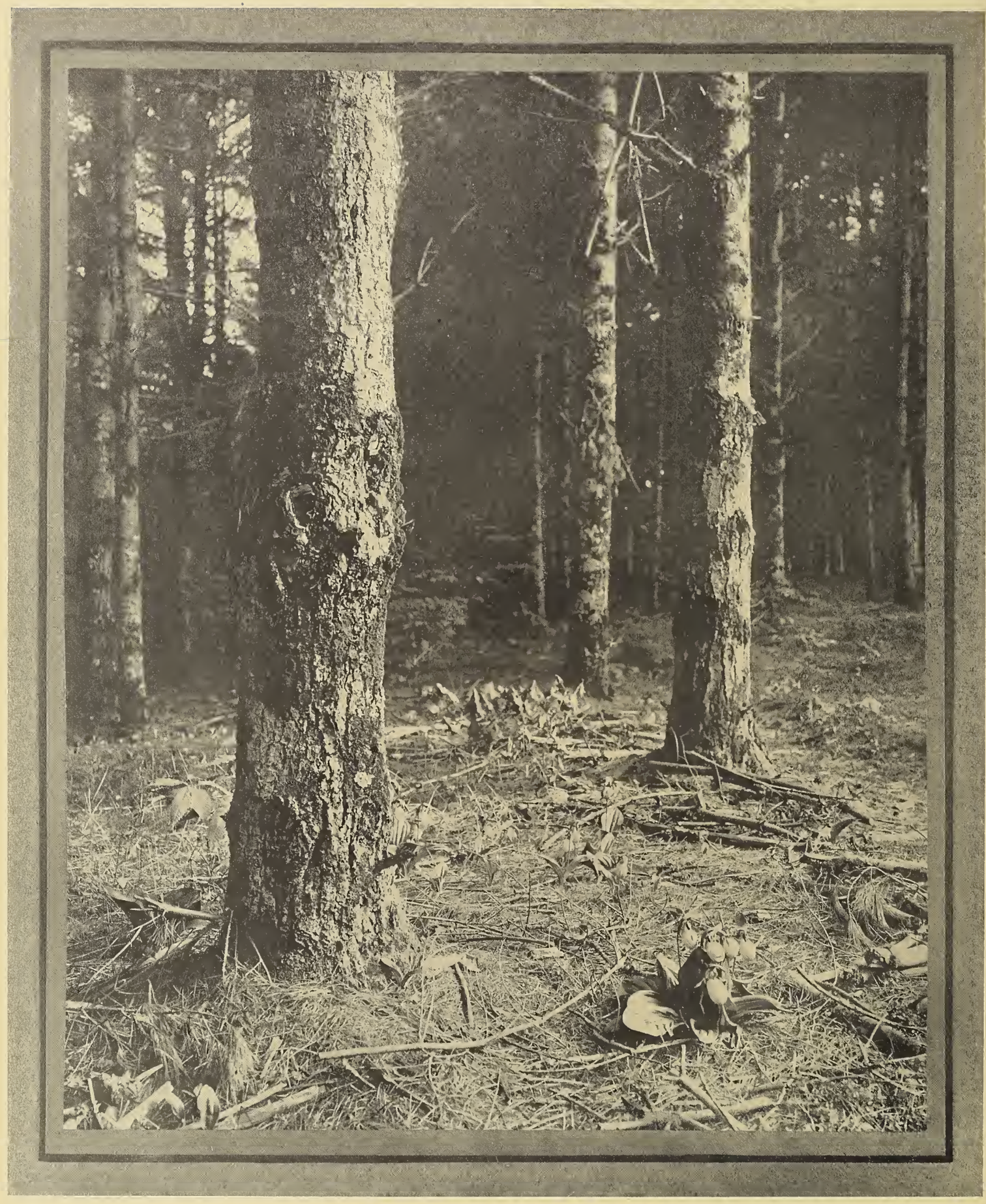
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HENRY H. SAYLOR, EDITOR



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THE GARDEN OF THE SILENT PLACES

Lady Slippers (Cypripedium) lend their graceful beauty to the pine-carpeted woods almost as soon as the snow has left them. Fortunate indeed is he who can have such a wild garden as an annex to the more formal one of his own planting

House & Garden

VOLUME XIX April, 1911 NUMBER 4

What My Garden Means to Me

BY HANNA RION

AUTHOR OF "THE GARDEN IN THE WILDERNESS," "THE GARDEN OF MANY LITTLE PATHS," ETC.

THE greatest gift of a garden is the restoration of the five senses. During the first year in the country I noticed but few birds, the second year I saw a few more, but by the fourth year the air, the tree-tops, the thickets and ground seemed teeming with bird life. Where did they all suddenly come from? I asked myself. The birds had always been there, but I hadn't the power to see; I had been made purblind by the city, and only gradually regained my power of sight.

My ears, deafened by the ceaseless whirr and din of commerce, had lost the keenness which catches the nuances of bird melody, and it was long before I was cognizant of distinguishing the varying tones that afterward meant joy, sorrow, loss or love to me. That hearing eventually has become so keen, there is no bond of sleep so strong that the note of a strange bird will not pierce to the unsleeping subconscious ear and arouse me instantly to alertness in every fibre of being. I wonder now if even death will make me insensate to the first chirp of a vanguard robin in March.



"Garden-making is creative work, just as much as painting or writing a poem. It is a personal expression of self, an individual conception of beauty"

During that half-awake first year of country life I was walking with a nature-wise man, and as we passed by a field where the cut hay lay wilting, he whiffed and said, "There's a good deal of rag-weed in that hay." I gazed on him with the admiration I've saved all my life for wizards, and wondered what peculiar brand of nose he had.

Then the heart, the poor jaded heart, that must etherize itself to endure the grimness of city life at all, how subtly it begins throbbing again in unison with the great Symphony of the Natural. The awakened heart can sense spring in the air when there is no visible suggestion in calendar or frosted earth, and knowing the songful secret, the heart can cause the feet to dance through a day that would only mean winter to an urbanite.

The sense of taste can only be restored by a constant diet of unwilted vegetables and freshly picked fruit.

The delicacy of touch comes back gradually by tending injured birdlings, the handling of fragile infant plants, and the acquaintance with different leaf textures which finally makes one able to distinguish, even in the dark, a plant by its Irish tweed, silken or fur finish.

And the foot, how intangibly it becomes sensitized; how instinctively it avoids a plant even when the eye is busy elsewhere. On the darkest night I can traverse the rocky ravine, the thickets, the sinuous paths through overgrown patches and never stumble, scratch myself or crush a leaf. My foot knows every unevenness of each individual bit of garden, and adjusts itself lovingly without conscious thought of brain or even use of eyes.

To the ears that have learned to catch the first tentative lute of a marsh frog in spring, orchestras are no longer necessary. To the eyes that have regained their sight more wonder lies in the craftsmanship of a tiny leaf-form of inconsequential weed than is to be found in a bombastic arras. To the resuscitated nose is



"A garden is ageless, and the gardener becomes ageless too, as ageless as the wind, the rain, the sun, summer and winter, for he becomes one with them all.

revealed the illimitable secrets of earth incense, the whole gamut of flower perfume, and other fragrant odors too intangible to be classed, odors which wing the spirit to realms our bodies are as yet too clumsy to inhabit.

To the awakened mind there is nothing so lowly in the things below and above ground but can command respect and study. Darwin spent only thirty years on the study of the humble earthworm.

To get the greatest good from a garden we should not undertake more than we can personally take care of. I have not had a gardener since the first year, when outside help was necessary for the translation of the sumach and briar patches of our Wilderness into arable land. A gardener is only helpful for the preliminary work of spading; after that his very presence is a profanation.

Garden-making is creative work, just as much as painting or writing a poem. It is a personal expression of self, an individual conception of beauty. I should as soon think of asking a secretary to write my book, or the cook to assist in a water-color painting, as to permit a gardener to plant, or dig among my flowers. For in even the most unimportant parts of my garden are little secret treasures—a stray cornflower that a Bedouin wind lured from its home-bed, a shy wild violet that strayed from the woods, being tired of blushing unseen, a blood-root which must have been brought some night by a fairy; where is the gardener whose eye and heart have been trained to respect these chance visitors?

The ancients had a delightful way of commemorating events and people by marble and other enduring things. I *can* see why we should hesitate to borrow from friends, but I don't see why we shouldn't borrow from dead Greeks; therefore I've made my garden largely commemorative, and memorial.

For instance, there's that hedge on the north boundary; it's true we needed a wind-break there, but it was much sweeter to forget necessity and let its planting become an epic; therefore after one especially delightful honeymoon (we have them annually and sometimes accidentally) we came home with the new enthusiasm bred of a short absence from home, and set out ninety-something hemlocks and called it "The Honeymoon Hedge." Then there is the Terrace planned in honor of the advent of two dearly-loved friends who had a weakness for breakfasting outdoors. I made my garden-partner haul stones like an Italian laborer, for days, and we both behaved like ground-moles tunneling out earth for many other days; and then a great christening rain descended prematurely, and we only achieved a mud-hole in a stone quarry by the

time the friends arrived. But they had the prophetic eyes of poets, and when, shod with galoshes, they plowed through the mud of their future terrace they could imagine all the beauty we had intended, and almost wept with gratitude, and were perfectly docile about breakfasting indoors.

The Terrace was eventually finished—I ought to know, because I laid thirty feet of stone wall (which I find out by the dictionary should be called a "Ha-Ha," though I never suspected it had such a mirthful name at that skinned-thumb time), and we planted it with hundreds of tulips, thousands of hyacinths, a million crocus, and a trillion grass-seed and six Dorothy Perkins. The next year when the dear friends came again the Terrace was too beautiful to breakfast upon; they could only stand at a respectful distance with bared heads while it was formally dedicated.

There also is the rose-garden annex, planned for the aforesaid partner's birthday, he being prohibited from constitutionaling in that portion of our realm for days. When the first of June arrived there stood—well, I won't say exactly the number, but if I had been a prosaic person I would have purchased just the same number of candles to stick on a short-lived birthday cake, as I planted roses in the abiding chocolate cake of the ground.

Of course every true gardener saves his own seed, thereby gradually bringing all the different varieties to greater perfection, and incidentally he may name these self-developed brands after otherwise unfamed friends.

Whenever there is a particularly eccentric or beautiful color shown in a blossom, I tie a tape about it, and write its praise on the tape, so that when the seed is harvested a fickle memory need not be relied upon. By saving each year the very darkest hollyhock of the blackish variety, I finally achieved the actually black flowers, and had a chance to evidence my admiration of a certain friend's hair (not her character) by bestowing her name on the hollyhock.

If a man has an extravagant wife who cannot resist Irish lace robes when displayed on a lay-lady in a department store window, he should just gently lead her to the country, present her with two acres, or one and a-half, of ground, introduce her to flower catalogues and teach her to dig. She'll soon forget manicurists. It's the simplest general cure of all feminine weaknesses I know of.

No woman, once demoralized into a gardener, ever hesitated when confronted with a choice between a new gown and—well, say all the peonies, peach trees, roses and rhubarb plants the same amount would purchase. No wonder the first woman gardener could only afford the fig-leaf; all her clothes money went for anemones and more apple trees. One can only measure their change by retrospection; when a backward glance produces a finer



"I don't believe any living creatures could remain bad if they associated daily with flowers, for flowers have such an Irish way of seducing with blarney of beauty to the simple, real and only abiding things of life"



content with one's present state, then surely the spirit is not retrograding. I'm sure I'm a reconstructed being in more ways than one since I moved to the country, especially in my attitude toward vegetables. During the first year I ignored the "sass patch"—treated it as a snob does the real toilers of this world. But gradually lured by the sheer beauty of bejewelled-by-dew cabbage, the fragrance of the onion, I now expend as much muscle on the vegetable kingdom as I do on my roses, and incidentally I've become a vegetarian.

That's the only way to become one—just because there are so many good vegetables to eat, one doesn't need to encourage the slaughter of beasts to be well fed.

And this kind of vegetarian, the accidental kind, is not afflicted with anaemia; it is only the theories of the professional vegetarian that makes him look so bloodless.

When we were once without a maid, and very busy in the studio, we didn't have time to prepare course dinners, so we chucked thirteen different kinds of vegetables in a big aluminum preserving kettle and went off about our business of being great. After several hours we came to, and remembering the pot a-boiling gave a yell of dismay; we were so sure it was burnt I don't think we had time to use the stairs, the banisters were more expedite. Now, if that pot had contained a chicken it would have gone to glory, but lo and behold, there were our faithful vegetables philosophically stewing away, sending forth a fragrance that was like a patch quilt of odors. And when we sat down to sample the thirteen courses compressed into one, we found a dish delectable enough to make Lucullus and Sulla resurrect before their time. Of course we had so much left over, after we'd gorged ourselves, the next day was provided for too, and by merely adding a preponderance of tomato the stew was metamorphosed on Tuesday (we'll say it was Monday when this kitchen vaudeville began), and on Tuesday the meal was quite different; on Wednesday by the addition of much cabbage and little disks of bacon, still another culinary enigma was achieved; on Thursday a heavy hand with celery made a new avatar of the dish; on Friday carrots recklessly donated caused a strange masquerade of flavor; on Saturday cauliflower gave the departing a reprieve, and on Sunday we held a wake over all the ghosts of thirteen vanishing vegetables.

The gardener is an explorer, an experimentalist, an idealist, and best of all he becomes inevitably a humanitarian. If he is an artist, he can satisfy all the cravings of his soul for color and pictures; if a musician he can find expression for all the harmony in his being. Music, painting and gardening are based on the same laws of color, harmony, composition. Take a long path that is bordered by hollyhocks on each side, ranging from white through pinks, lilacs, salmon, red, yellow, climaxing with black.

The path leads curvingly, luringly to a point of exceeding loveliness, an open vista commanding a general view of the garden, and the distant hills and countryside. Is it not like the gradual crescendo of a passage of music developing through tones of ever-increasing richness to the final magnificent chord? A gardener lives in the present and future; if he has a sad past, he forgets it.

A garden is ageless, and the gardener becomes ageless too, as ageless as the wind, the rain, the sun, summer and winter, for he becomes one with them all.

I don't believe any living creatures could remain bad if they associated daily with flowers, for flowers have such an Irish way of seducing with blarney of beauty to the simple, real and only abiding things of life.

Finding contentment, the gardener exhales it.

Tucked away in a dim corner of the curiosity shop of my brain is a fragment heard, read or dreamed some time in the nebulous

(*Continued on page* 300)



"If the gardener is an artist, he can satisfy all the cravings of his soul for color and pictures; if a musician, he can find expression for all the harmony in his being"



For March plant the snowdrop in the partial shade of dusky evergreens



In April the forsythia or golden bell takes the centre of the stage



German iris is the reigning flower of May, if planted in generous masses

The All-Star Garden of a Business Man

HOW THE MAN WHO HAS LITTLE TIME TO DEVOTE TO HIS GARDEN MAY HAVE AN UNFAILING SUCCESSION OF BLOOM FROM THE BEST THINGS THAT GROW

BY HENRY H. SAYLOR

Photographs by N. R. Graves, E. J. Hall, the author and others

IT sounds decidedly paradoxical, does it not, to affirm that the man who has the least amount of spare time to spend upon the appearance of his home surroundings may have the very best that the horticultural world offers? It really sounds too good to be true; yet that is what I am going to try to show.

I shall never forget the feeling of utter, hopeless ignorance that swept over me when my eyes were first opened to the beauty, my understanding to the joy, that a garden offers. As I pored over book and magazine, seedmen's catalogues and planting tables, there gradually came a realization of the immensity—the real awe-inspiring depth, of the subject. The terms "annual," "perennial," herbaceous shrub," "mulch" and "scale," meant as little to me as did the portentious Latin names of genera and variety. At the mere thought that any mind could ever grasp all the details of nomenclature, the manner of plants' growth, their respective heights, time and length of bloom, color, requirements of soil, light, shade and moisture, sowing, transplanting, pruning and fertilizing—at the mere thought that a single mind must be able to coördinate all these and many other facts before planning a garden that would give continuous and harmonious bloom, my reason fairly tottered. Nor does the problem seem much easier on closer acquaintance. The really successful "garden," as we understand the term—a garden of some extent, in which are found at least the main representatives of the floral kingdom, arranged in close and always harmonious relationship, is never achieved in a day. Only year after year of tireless experimenting, with adherence to a single general plan for the whole, will bring at least a fair approximation of the ideal—never the goal itself.

But, how, then, is our friend the business man, with little time to spare, going to achieve even a reasonable measure of success in the setting for his house? In a word, by planting only a few things, and those the real giants of the garden—the "stars" of the garden stage.

Did you ever stop to think that every month from early spring through the autumn brings at least one flowering plant that stands supreme among its fellows—the peony of June, the hardy chysanthemum of November, for instance? But mere superiority of appearance will not be enough as the test for those plants that will bring success to our business man's garden. We must have only those things that need little or no care, that are highly resistant to the army of garden pests. And we shall prefer a variety of form, so that all shall not be border flowers, or shrubs, or vines. Our business man's garden must not be merely that of a collector, having all phloxes or all roses.

What we do want, then, is a steady succession of the really big garden features—a variety of them, resistant to disease, and each fully capable of occupying the whole stage at the height



Also in May comes the bloom of that dazzling shrub, Van Houtte's spirea

of its glory. And if they are to do this in a really satisfying way we must plan generous masses of each. A plant or two, or a shrub or two, from among those we select will make but a feeble showing. Each must seize the stage in its turn with a blare of trumpets—and hold it for its appointed time. Whether there is to be one large group of each selection, or several groups in different points throughout the garden is a matter to be determined by the plan of your own particular place. Only let there be not the slightest doubt, at any time, as to which star is holding the stage.



Peonies should rule June; if you have time for their care, add roses as here

Well, let us get at this matter of selecting those things that are to reign, each in its turn. I have no doubt that you will disagree with me on many of these; but do not, I beg of you, discard the principle of the thing if your gardening knowledge is small and your gardening time very limited; substitute other plants or shrubs or vines, if you will—this is but a personal choice.

For the very first flower of spring to rule the month of March, I nominate the snowdrop—the common old-fashioned sort that bears the weighty name of *Galanthus nivalis*. It is the first sign of awakening Nature, appearing often beside patches of snow — the most inspiring, ethereal, delicate white flower imaginable. Plant the bulbs in the fall, scattered over a patch of lawn that is partially shaded—preferably by dusky evergreens. Plant several hundred of the tiny bulbs at least. The flower is so small that it simply must have the reinforcement of plenty of its fellows —and they cost but a dollar a hundred. Once set, they may be forgotten—until they overwhelm you with their cheering message that spring has returned.

For April's share in the pageant of bloom let me recommend the forsythia or golden bells. You know the shrub—the first and one of the very few yellow-flowering ones. Its drooping branches burst into a mass of gold from base to tip before the trees really get under way in their leaf-making. The variety *Forsythia Fortunei* is probably the best. Plant several masses of the shrubs in the background of your border; their foliage will set off the flowers that come later. Here again the groups, once planted, preferably in the fall, need no further attention for years to come.

Call me inconsistent if you will, but I am going to name two stars to rule May. My plea is that the time has come when we must have a border flower coming into the limelight — we've had bulbs and shrubs, and yet we need more of the foliage - producing



Hiawatha, a sturdy climbing rose for the July garden; petals crimson to white



Nothing compares with the hardy hydrangea for late-summer bloom among the shrubs



Let a row of stately hollyhocks dominate the garden in July

element to form backgrounds for later effects, and to give that air of solidity and permanence to the garden that shrubs do give. So it's to be the German iris—in mass, once more, and that most dazzling of shrubs the *Spirea Van Houttei*. I shall leave the choice of colorings in the iris to your own taste; there are varieties in white, pink, deep purple, lavender and yellow, with almost innumerable combinations of these. Whatever you choose, plant plenty of white to set the other colors off to best advantage. The spireas will need no attention after the first planting in a large deeply worked location. After setting out the irises, in early fall, all they will require will be an occasional division of the clumps as these grow too big. In dividing, do not make the clumps too small, or you will lose a season of bloom.

So we come to June—the queen of all the months in the garden, and what a wealth of material it brings us from which to choose! At the risk—rather, upon the certainty—of being branded a heretic, I am going to pass by the rose and advise the business man to give June over to the peony. I haven't a thing against the rose, but its smaller enemies in the animal kingdom certainly have, if we may judge by the viciousness of their attacks upon it. What with the rose-bug and the mildew and the blackspot and the greenfly and the scale and the slug, the "queen of flowers" would give our business man

troublous times in prolonging her reign. The peony, on the other hand, doesn't seem to have an enemy in the world. Up come its deep red shoots with the spring-flowering bulbs, and they bring in June a wealth of bloom that truly is incomparable. All the peony asks is to be well fed. Set out the dormant roots in the fall, and the only labor to follow is an annual rich mulch of manure in November, an application or two of liquid manure as a stimulant when the flowering begins, and every three years or so a division of the clumps. Here again, I shall leave the selection of colors and types of flowers to your own good judgment. Just a word of caution, though: Choose largely from the good old tried-and-true sorts; there are magnificent new varieties constantly being put forth, but many of them are only different from, not better than, the thoroughly fixed varieties.



Speciosum lilies occupy the stage in August. Plant with them a few auratums —Japanese lilies

For July I would suggest hollyhocks—a stately row of them, preferably nodding in at the window along the sunny side of the house. Do not neglect the old-fashioned single-flowered varieties — in pale pink, yellow and red—in favor of the newer double sorts, though some of the latter will add to the interest of the showing. Hollyhocks are supposed to be biennials—that is, the plants from last fall's seed will bloom the summer after the one that is coming. As a matter of fact though, the plants continue to bloom usually for several years after that, and as the seeds sow themselves you will never lack for thrifty young bloomers, provided only that the soil in which they grow is really deep—three feet of loose loam if possible. And with the hollyhock, to add to my inconsistency, and at the same time throw a sop to the man who refuses to live without some sort of a rose, I would brighten July with one of the hardy climbing roses—by preference a hybrid of the good old Memorial or *Rosa wichuraiana*. There are plenty from which to choose—Hiawatha (see illustration), a charming combination of ruby-crimson and white with yellow anthers; the well known Dorothy Perkins, a pink double; Gardinia, a yellowish white double; Tausendschön, pink double; Lady Gay, shell-pink double in clusters, and others. And there is another reason for adding a climbing rose to our list; it will help to blend the house with its site more satisfactorily than shrubs alone or border flowers alone, or the two together.



The dahlia is unquestionably the reigning flower of September



Let the phloxes rule October—the late-flowering sorts, with plenty of white

For August the lily would be my choice. It brings to the list a new note in its stateliness and cool purity. And *Lilium speciosum*, it seems to me, should form the backbone of the display. The *auratum* lily, from Japan, blooms at about the same time, and is considered by many to be the most beautiful of all the family, but it is apt to die out after about three years, so it is well to plant only a few bulbs of it with the speciosum. With the lily will come into bloom one of the finest shrubs that we have—the hardy hydrangea, and it must be added to our list to carry on into the fall the burden of bloom. The great heads of white turn pink with the cool weather and if cut off they will hold their color after the first severe frosts throughout the winter indoors. Put a large bunch of them in a brass bowl on some high shelf or other out-of-the way place. Severe pruning in the late fall or winter is all that the hydrangea needs; the bloom is borne on the new wood each season.



Many varieties of the hardy chrysanthemum will brighten the garden to November fifteenth

The dahlia is the reigning star of the September garden, and if you have not recently seen the amazing variety of form and color in which it is now obtainable, there is a rare treat in store for you. It alone of the list will need annual planting; each fall, late, the bulbs will have to be taken up, hung in a dry place indoors to ripen, and set out again in May. The best way to choose the varieties you want, is to visit a dahlia exhibition in the fall, or note the ones that appeal to you in some other garden.

In October the late varieties of phlox are fully able to keep up

(*Continued on page 290*)



The Month's Activities



A CAREFULLY PLANNED CAMPAIGN FOR THE BUSIEST MONTH IN THE GARDENER'S YEAR—WHAT TO DO AND JUST HOW TO DO IT

Photographs by F. F. Rockwell, E. J. Hall, N. R. Graves and others

[This article is designed to furnish in compact space and a few plain instructions, information that will enable the busy person, who has not made his or her garden preparations ahead, to have a successful garden notwithstanding. The tables and cultural directions, together with the plan provided for keeping an accurate record of both the flower and vegetable garden for future reference, will prove of great value to everyone who plants. Do not fail to remove and mount this Guide as suggested. It will make this year's gardening easier and next year's better.—EDITOR.]

IF all the advice that HOUSE & GARDEN and other good horticultural magazines have been giving for the last few months had been carried out by every reader, I suppose the professional market gardeners would be pretty nearly forced out of business, and that there would be no need of this article. But there are men who, for lack of time or other good reasons, have not yet bought their seeds, started their own vegetable and flower plants, had their gardens plowed, and are not now sitting down and impatiently waiting the first day warm enough to plant.

It is the person who must begin at once and work fast or the one who has no garden at all, as well as the garden enthusiast, that this article is designed to help. If you have made all your preparations, so much the better; but if you have not, it is not too late to pitch in now and have a garden that will take your neighbors by surprise. You can, if you will, plan a Napoleonic garden campaign that cannot fail to bring a great degree of success; yes, even if you have to leave most of the actual labor to a hired man—though in that case you will lose just half the fun of the thing.

The first thing to consider is the manure heap, or, in lieu of that the commercial fertilizer. Get the manure if you can. The chances are largely that it will give you better results than the chemical fertilizers, especially if you have not had experience in using the latter. (Read the article on page 257.) Buy a few loads of well-rotted manure—it should be dark and crumbling and free from large lumps—from some farmer or livery stable. If pigs have run on it is is worth more. Have this scattered evenly over the garden plot, so as to cover the ground with it. The more you put on, up to three inches thick, the more profitable your garden will prove to be.



If the soil is at all dry firm the seed into the rows with the ball of the foot; then cover with loose earth

This task finished, you are ready for the plowman. (If you can't get manure, and have to use chemical fertilizers altogether, plow first and put on the fertilizer afterward, as directed later.) Get a man who knows his work and will turn your land over to the bottom, or sub-soil—four, six, eight inches deep, as the case may be. Don't let him start to plow until the soil has dried out enough to crumble as it leaves the plowshare. If it's wet and sticky it isn't ready for plowing. Have him use a reversible plow, so as not to leave any wasteful "dead" furrow and unproductive tramped corners.

If your garden patch is too small to plow, get it spaded. Whether you yourself do this work, or whether you have it done, see that the soil is dug to the bottom and thoroughly turned. By taking a strip not quite twice the width of the spade or fork, and cutting at each thrust diagonally, you will find the work much lessened.

Unless you have provided a very heavy coating of manure, the addition of some chemical fertilizer after the ground is plowed and before harrowing will prove a profitable investment. It doesn't matter very much what the brand is; get the analysis as near 4-8-10 as you can—that is, 4 per cent. nitrogen, 8 per cent. phosphoric acid, 10 per cent. potash. Remember that, as a general thing the more you pay per bag the cheaper you are getting your real plant food. In addition get fifty or a hundred pounds of nitrate of soda to use for top dressing during the season. Three hundred and fifty pounds of such a fertilizer will not be too much for a quarter-acre garden, if used without manure. If some manure is used, cut down the amount of fertilizer in proportion. On a calm day broadcast the fertilizer evenly over the ground. You will get it distributed more evenly by making two applications, first walking across the garden and then up and down the length. It will be well to keep half a bag or so for some crops that need extra assistance later, also to sow where second or succession crops are grown.

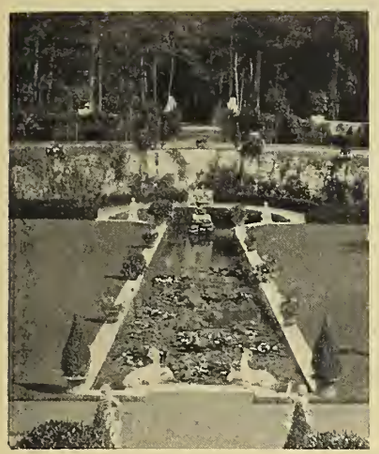
Don't put on the fertilizer until you are ready to follow its application immediately with the harrow. Of these there are several types (see article on garden tools on page 254). The nature of your soil will determine which is best for your use. As a general thing a disc harrow, followed by a spike-tooth harrow for leveling the surface, will put things in very good shape. But whatever the kind, see that the harrowing is kept up until the soil is well pulverized and fined to a depth of several inches. In a small plot, of course, you will have to rely upon the iron rake and the wheel hoe or hand hoe to do your harrowing with. In this case, it will be well to apply fertilizer only to that part of the garden which you expect to sow or plant within a few days.

The harrowing should be followed immediately by sowing or planting, with a final leveling of the soil with the iron rake; and you should finish it off so fine and smooth that a cat couldn't walk across it without leaving very noticeable tracks. In such a fine seed-bed, the little rootlets will not dry up in dead air spaces before striking into the soil; and the little seedlings will not be smothered beneath stones, trash and lumps of earth too heavy for them to lift.

This much is preliminary; now for what is to go into the ground, after it is ready. The work described above will have taken several days—but everything suggested there can be done within that short time, remember that. In the meantime there will be work for your evenings. The success of this garden campaign of yours will depend upon your giving at least a few hours to planning carefully ahead the lines of action. After that you can, if need be, turn it over to someone else to carry out.

Measure off your garden plot and make a sketch to scale on a paper of convenient size. Then refer to the table on page 246 and

(*Continued on page* 249)



"Bellefontaine," Lenox, Mass.—the formal sunken type with the lily pool as a central feature



An unusual example of the formal type, in that it is laid out on an open plain instead of having a frame of woods



The formal bulb garden of spring. After blooming the bulbs give way to other bedding plants

TYPES OF FLOWER GARDENS



An inspiration for the beginner—a garden of annuals giving a mass of color from seed sown now, but you will have to do it all over next year



The typical English "doorway garden," where lawns are replaced by a tangle of perennials that bloom and increase from generation to generation



The wild garden along the path through the woods. Rhododendrons line the flag walk and early spring bulbs are naturalized with the pansies around the flagstones



A combination of rock and water garden that furnishes a home for all sorts of shy bog and Alpine plants



A Japanese garden must have its winding stream, giving opportunity for bridge and stepping-stones, reflections and mystic symbolism

KEY	FLOWER	DISTANCE OF PLANTS APART (IN.)	BLOOM	COLOR	HEIGHT (INCHES)	USE	DIRECTIONS	FLOWERS
P	AQUILEGIA (Columbine) † ‖	12	June-July	Various	12-24	Mass-border	The seed of most of the garden flowers is very small; some of it as fine as pepper. Although these tiny flower seeds will often develop into good plants under most adverse conditions, success with them can be made certain only by taking great care in preparing the seed-bed and transplanting. While some, like the poppy, which does not gracefully bear transplanting, may do better if sown where wanted; most of them will make better plants by sowing in a specially prepared seed-bed and transplanting. Such a bed should be well drained and slightly raised—4 feet wide and length required will be a convenient size—and the surface soil should be light, sandy and finely sifted. Mark off with pointed stick, across the bed, drills about five times the depth of the diameter of seed to be sown, and 6 to 12 inches apart. Scatter thinly—three to fifteen seeds, according to size, to the inch; firm lightly into the soil, cover and firm lightly on top. Tag each row! If soil is at all dry, water day previous to sowing. If seedlings come up too thickly, thin out. Remember a dozen good plants will give more satisfaction than a hundred poor ones. Keep seed-bed clean, and when plants begin to crowd, transplant on cloudy day or late afternoon to permanent beds. If hot, shelter for a day or two from direct sun. (See about setting out plants in accompanying article.) Most garden seeds should be sown out-doors in May. If like sweet peas and cosmos, they should be put in earlier; directions on packets — read these always—will give instructions. Many sorts may with advantage be started in frames or in the house, or bought from a local florist, thus securing an immediate display in the garden.	AQUILEGIA (Columbine)
P	ACHILLEA F	10	July	Various	12-36	Border		ACHILLEA
P A	ADONIS	6	May-June	Yellow	12	Border		ADONIS
A	AGERATUM † ‖ F	5	June-Oct.	Blue white	24	Mass-edging		AGERATUM
P	ANEMONE † F	12	Aug.-Oct.	White to rose	12-36	Mass-border		ANEMONE
A	ASTER †	12-15	July-Sept.	Various	12-18	Mass-edging		ASTER
A	BACHELOR'S BUTTON † ° ‖	6	July	White, blue, pink	15-20	Border		BACHELOR'S BUTTON
A	BALSAM F	15	June-Sept.	Various	10-18	Mass-border		BALSAM
P	BLEEDING-HEART (Dicentra)	24	May-Aug.	Crimson, purple	8-19	Mass		BLEEDING-HEART (Dicentra)
A	CALENDULA	12	June-Oct.	Orange, yellow	22-24	Mass-border		CALENDULA
A	CALIFORNIA POPPY	8	August	Orange, yellow	12	Mass-edging		CALIFORNIA POPPY
P A	CAMPANULA	8	June-July	White, blue, pink	18-36	Border		CAMPANULA
A	CANDYTUFT † F	4-12	June-Sept.	White	6-8	Mass-edging		CANDYTUFT
A	CASTOR BEAN	36	Foliage	Foliage	60-90	Screen, ornamental		CASTOR BEAN
P A	CHRYSANTHEMUM † F	18	Aug.-Oct.	Various	12-36	Mass-border		CHRYSANTHEMUM
A	CLARKIA †	8	June-Sept.	White, rose, purple	18	Mass		CLARKIA
A	COCKSCOMB	8	June-Oct.	White, red, yellow, purple	6-12	Border		COCKSCOMB
P	CORAL BELL ‖	15	July-Aug.	Coral red	12-30	Border		CORAL BELL
A	COREOPSIS † °	12	June-Aug.	Yellow-brown	12	Mass		COREOPSIS
A	CORNFLOWER †	8	June	White, blue, rose	12	Mass		CORNFLOWER
A	COSMOS † °	24	Aug.-Sept.	White, pink, red	24-72	Mass		COSMOS
P	DAHLIA F	36	July-Sept.	Various	24-36	Edging		DAHLIA
P	DAISY F	6	May	White, pink, rose	6-8	Edging		DAISY
P B	EVENING PRIMROSE	10	July-Aug.	Yellow	60	Edging		EVENING PRIMROSE
P A	FORGET-ME-NOT §	6	April-July	Blue	6-18	Border		FORGET-ME-NOT
P B	FOUR-O'CLOCK °	10	July-Aug.	White, red, yellow	30	Mass-screening		FOUR-O'CLOCK
P	FOXGLOVE § ‖	10	June	Pink, white	10-36	Mass		FOXGLOVE
A	GAILLARDIA †	12	July-Oct.	Red, yellow	36-60	Mass-border		GAILLARDIA
A	GLOBE AMARANTH †	10	July	Pink	18	Mass		GLOBE AMARANTH
A	GODETIA † ‖	8-12	July-Oct.	Red, white	12-24	Mass		GODETIA
A	GOURDS	12	July-Oct.	Various colored fruits	60-170	Mass		GOURDS
P	HELIOPSIS	8-12	July	Yellow	36-48	Mass		HELIOPSIS
P	HELIANTHUS §	24-48	Aug-Sept.	Yellow	24-120	Ornamental		HELIANTHUS
B	HOLLYHOCK F	12-16	August	White to rose, yellow	36-72	Screening		HOLLYHOCK
P A	ICELAND POPPY	5	June-Sept.	White, yellow to orange	15	Mass		ICELAND POPPY
P	IRIS * F	8-12	May-July	White, yellow, blue	18-30	Mass-border		IRIS
P A	LARKSPUR † °	6-10	June-July	White, blue, pink	12-60	Border		LARKSPUR
A	LAVATERA	8	July	Rose	36-72	Screening		LAVATERA
A	LOBELIA § † ‖ F	3	June-Sept.	Blue, crimson	6-12	Mass-edging		LOBELIA
A	LOVE-LIES-BLEEDING °	10	June-July	Yellow to scarlet	36-60	Mass		LOVE-LIES-BLEEDING
A	LOVE-IN-A-MIST	10	June-Sept.	White, blue	12-24	Border		LOVE-IN-A-MIST
P A	LUPINE † ‖	4	June	White, blue, pink	12-24	Mass		LUPINE
P	MALLOW § F	8	July-Sept.	Rose, white	18-30	Mass		MALLOW
A	MARIGOLD † ° F	6	Aug.-Oct.	Lemon to orange	10-24	Mass-edging		MARIGOLD
A	MIGNONETTE * †	6	July-Oct.	Green, white	12	Mass-edging		MIGNONETTE
P	MONKSHOOD (poisonous) ‖	10	July-Aug.	Blue, white	36	Border		MONKSHOOD (poisonous)
A	MOONFLOWER ‡ F	6	Aug.-Sept.	White	15-30 ft.	Screening-vine		MOONFLOWER
A	MORNING GLORY ‡ °	4	July-Aug.	Various	10-20 ft.	Screening-vine		MORNING GLORY
A	NASTURTIUM * † ‡	5-12	July-Oct.	Various	1-60	Mass-screening		NASTURTIUM
A	NICOTIANA * † ‖	8-12	July-Aug.	White, red	36-60	Mass		NICOTIANA
P A	PANSY * ‖ F	7	May-Oct.	Various	6	Border		PANSY
P	PEONY * F	24	May-June	Red, pink, white	24-36	Mass		PEONY
A	PETUNIA ° F	8-12	July-Sept.	White to claret	12-24	Mass-edging		PETUNIA
P A	PHLOX † F	8-12	July-Oct.	All except blue and yellow	12-60	Mass-edging		PHLOX
P A	PINK †	5	August	White to rose	4-12	Border		PINK
A	POPPY † °	4	July-Aug.	White to scarlet	6-24	Mass		POPPY
A	PORTULACA °	4	July-Oct.	White, red, yellow	6-9	Mass-edging		PORTULACA
P	PRIMROSE	5	April-May	Yellow, pink	4	Mass-border		PRIMROSE
P	PYRETHRUM † F	12	Aug.-Oct.	Various	12-24	Mass-border		PYRETHRUM
P	RUDBECKIA (Golden Glow) † F	12	Aug.-Sept.	Yellow	60-100	Mass-screening		RUDBECKIA (Golden Glow)
A	SALPIGLOSSIS F	6	June-Aug.	Various	12-24	Mass-border		SALPIGLOSSIS
P A	SALVIA † ° ‖ F	5	Aug.-Oct.	Scarlet	10-24	Border		SALVIA
P	SCABIOSA †	6	June-Aug.	White, yellow, blue, maroon	12-36	Border		SCABIOSA
A	SCHIZANTHUS	8	July-Aug.	Mixed, yellow, lilac	24	Mass-edging		SCHIZANTHUS
P	SILENE †	5	June-Aug.	White to rose	3-5	Mass-border		SILENE
P A	SNAPDRAGON † F	8	July-Aug.	Various	24	Border		SNAPDRAGON
A	STOCK † F	5	June-July	White to crimson	18	Screening		STOCK
P A	SUNFLOWER § °	24-48	August	Yellow	36-100	Screening		SUNFLOWER
A	SWEET ALYSSUM † ° F	4	May-Sept.	White	8	Mass-edging		SWEET ALYSSUM
A	SWEET PEA * † ‡	8	June-Oct.	Various	12-72	Screening		SWEET PEA
P B	SWEET WILLIAM (Dianthus)	8	July-Aug.	White, pink, red	12	Border		SWEET WILLIAM (Dianthus)
P	VERBENA † F	12	June-Aug.	Various	5-18	Edging		VERBENA
P	VERONICA	8	August	Purple	24-30	Border		VERONICA
P	VIOLET * § ‖	6	March	Violet	6	Mass-edging		VIOLET
P B A	WALLFLOWER *	6	July-Aug.	Brown, yellow	12-30	Border		WALLFLOWER
A	ZINNIA † F	8	July-Oct.	Various	12-24	Mass		ZINNIA

RECORD

SOWN OR PLANTED

VARIETIES

P—Indicates hardy or tender perennials.
B—Biennials.
A—Annuals.
†—Flowers especially good for cutting.
*—Especially fragrant flowers.
§—Plants for moist places.

‡—Climbers.
°—Self-sowing annuals.
‖—Annuals that will thrive with partial shade.
F—Set growing plants, obtained from nurseryman or florist, for quicker results.

To use this planting table to best advantage, first cut it from the magazine. Cut off the heading strip at the right-hand edge, between the two lines, and mount the table and this heading on a sheet of heavy paper or cardboard to tack up in your tool-house. The heading strip is intended to continue the horizontal line of the table heading, having under it, on the mount, blank columns for your own notes. After mounting in this way, draw in with ink the continuation of the vertical lines, completing the record space.

VEGETABLE	VARIETIES	PLANT	DEPTH TO SOW—INS.	DISTANCE APART SEEDS[3]	DISTANCE APART ROWS	SEED FOR 50 FT. ROW	DIRECTIONS	VEGETABLE
		I. CROPS REMAINING ENTIRE SEASON						
Asparagus, seed..	Palmetto, Donald's Elmira, Barr's Mammoth	April-May	1	2-4 in.	15 in.	1 oz.	Transplant in spring of 2nd year.	Asparagus, seed.
Asparagus, plants.	Palmetto, Donald's Elmira, Barr's Mammoth	April	4	1 ft.	3 ft.	50	Divide roots and spread out level.	Asparagus, plants.
Bean, pole	Kentucky Wonder, Golden Cluster, Burger's Stringless	May 15-June 10..	2	3 ft.	3 ft.	½ pt.	Thin to four or five best plants.	Bean, pole.
Bean, lima	Early Leviathan, Giant Podded, Burpee Improved	May 20-June 10..	2	3 ft.	3 ft.	½ pt.	In sandy soil; put edgewise, eye down.	Bean, lima.
Beet, late	Crimson Globe	April-August	2	3-4 in.	15 in.	1 oz.	Scatter thinly; thin out on cloudy day.	Beet, late.
Carrot, late.	Danver's Half-long, Ox-heart, Chantenay	May-July	½-1	2-3 in.	15 in.	½ oz.	Deep soil; thin out; store for winter in sand or pits.	Carrot, late.
Corn, late	Seymour's Sweet Orange, White Evergreen, Country Gentleman	May 20-July 10..	2	3 ft.	4 ft.	½ pt.	Cultivate frequently; shallow.	Corn, late.
Cucumber	Early White Spine, Fordhook Famous, Davis Perfect	May 10-July 15..	1	4 ft.	4 ft.	½ oz.	Thin to two or three; protect from beetles.	Cucumber.
Egg Plant, seed..	Black Beauty, N. Y. Purple	June 1st	½	3-6 in.	15 in.	¼ oz.	Richest, moist soil; keep off potato beetle.	Egg Plant, seed.
Egg Plant, plants.	Black Beauty, N. Y. Purple	June 1-20	..	2 ft.	30 in.	25	Richest, moist soil; keep off potato beetle.	Egg Plant, plants.
Leek	American Flag	April	..	2-4 in.	15 in.	½ oz.	For best results, mulch about stalks. [five feet.	Leek.
Melon, musk	Netted Gem, Emerald Gem, Hoodoo	May 15-June 15..	1	4 ft.	4 ft.	½ oz.	Manure and sand in hills; pinch back vines at	Melon, musk.
Melon, water	Cole's Early, Sweetheart, Halbert Honey	May 15-June 15..	1	6-8 ft.	6-8 ft.	¼ oz.	Same; protect from bugs (also musk melon).	Melon, water.
Onion	Prizetaker, Danver's Globe, Ailsa Craig, Southport Red Globe, Mammoth Silver-skin (white)	April	½-1	2-4 in.	15 in.	½ oz.	Keep clean from weeds! Top-dress with ni-	Onion.
Okra	Perfected Perkins, White Velvet	May 15-June 15..	½-1	2 ft.	3 ft.	½ oz.	Hoe frequently. [trate of soda.	Okra.
Parsley[4]	Emerald	April-May	½	4-6 in.	1 ft.	½ oz.	Soak seed 12 hours before planting. [ground.	Parsley.
Parsnip	Hollow Crowned (Improved)	April	¼-1	3-5 in.	18 in.	¼ oz.	Deep soil; frost improves: store or leave in	Parsnip.
Pepper, seed	Ruby King, Chinese Giant	June 1st	½	3-6 in.	15 in.	½ oz.	Very tender; start in strong heat; rich soil.	Pepper, seed.
Pepper, plants	Ruby King, Chinese Giant	June 1-20	..	2 ft.	30 in.	25	Very tender; start in strong heat; rich soil.	Pepper, plants.
Potatoes, main	Irish Cobbler, Green Mountain, Uncle Sam (Noroton Beauty, Norwood, early)	April 15-June 20..	4-6	13 in.	30 in.	½ pk.	Cultivate frequently; hill up slightly.	Potatoes, main.
Pumpkins	Large Cheese, Quaker Pie	May 1-June 20..	1-2	6-8 ft.	6-8 ft.	¼ oz.	Manure under hills; pinch back vines.	Pumpkins.
Rhubarb, plants	Myatt's Victoria	April	..	2-3 ft.	3 ft.	25	Work soil, add nitrate of soda in March.	Rhubarb, plants.
Salsify	Mammoth Sandwich	April-May	1	3-6 in.	18 in.	¾ oz.	Deepest soil; store in pits or leave in ground.	Salsify.
Squash, summer.	White Bush, Delicata, Fordhook, Vegetable Marrow	May 15-July 1...	1-2	4 ft.	4 ft.	¼ oz.	Manure under hills; keep off bugs; for wilt-	Squash, summer.
Squash, winter	Hubbard, Delicious	May 15-June 20..	1-2	6-8 ft.	6-8 ft.	¼ oz.	ing vines slit stems to kill borer.	Squash, winter.
Tomato, seed	Earliana, Chalk's Jewel, Matchless, Dwarf Giant	June	½	3-4 in.	15 in.	½ oz.	Stake up; cut off suckers; tie on paper bags	Tomato, seed.
Tomato, plants..	Earliana, Chalk's Jewel, Matchless, Dwarf Giant	May 15-July 20..	..	3 ft.	3 ft.	20	Protect from cutworms. [for earliest fruit.	Tomato, plants.
		II. CROPS FOR SUCCESSION PLANTINGS						
Bean, dwarf	Red Valentine, Burpee's Greenpod, Improved Refugee, Brittle Wax, Rust-proof Golden Wax, Burpee's White Wax	May 5-Aug. 15...	2	2-4 in.	1½-2 ft.	1 pt.	Late frosts kill; ground not too rich.	Bean, dwarf.
Kohlrabi[4]	White Vienna	April-July	½-1	6-12 in.	1½-2 ft.	¼ oz.	Used when young; cooked thoroughly, is very good.	Kohlrabi.
Lettuce[4]	Mignonette, Grand Rapids, May King, Big Boston, New York, Deacon, Cos, Paris White	April-August	½	1 ft.	1-1½ ft.	50	Rich soil; grow rapidly; shade in July and Aug.	
Peas, smooth	American Wonder	April 1-Aug. 1...	2-3	2-4 in.	3 ft.	1 pt.	Not too rich; cultivate often.	Lettuce.
Peas, wrinkled	Gradus, Boston Unrivaled, Quite Content	April 10-July 15..	2-3	2-4 in.	3-4 ft.	1 pt.	Better quality; bush up early. Double rows.	Peas, smooth.
Radish	Rapid Red, Crimson Globe, Chinese	April 1-Sept. 1...	½	2-3 in.	1 ft.	½ oz.	Sow every ten days. Mix land-plaster with soil.	Peas, wrinkled.
Spinach	Swiss Chard Beet, Long Season, Victoria	April-Sept. 15....	1	3-5 in.	18 in.	½ oz.	Cover with straw for wintering over.	Radish.
Turnip	White Milan, Petrowski, Golden Ball	April-Sept.	½-1	4-6 in.	15 in.	½ oz.	Store for winter. Use when small.	Spinach.
								Turnip.
		III. CROPS TO BE FOLLOWED BY OTHERS						
Beet, early	Edmund's Early, Early Model	April-June	2	3-4 in.	15 in.	1 oz.	Start under glass, February, and set out.	Beet, early.
Broccoli, early[4]	Early White French	April	½-1	1½ ft.	2 ft.	35	See Cauliflower; is hardier.	Broccoli, early.
Borecole[4]	Dwarf Scotch Curled	April	½-1	2 ft.	2½ ft.	25	Better after sharp frost; treat like spinach.	Borecole.
Brussels Sprouts[4]	Dalkeith, Danish Prize	April	½-1	1½ ft.	2 ft.	35	See cabbage; excellent quality; keep all win-	Brussels Sprouts.
Cabbage, early[4]	Wakefield, Glory of Enkhuisen, Early Summer, Succession. Savoy						ter on stalks. [frequently.	Cabbage, early.
Carrot	Golden Ball, Early Scarlet Horn	April	½-1	1½ ft.	2 ft.	35	Harden off before setting out. Rich soil; hoe	Carrot.
Cauliflower[4]	Burpee's Best Early, Snowball. Sea-foam, Dry Weather	April	½-1	2-3 in.	15 in.	½ oz.	Deep soil; thin out; store in sand for winter.	Cauliflower.
Corn, early	Golden Bantam, Peep o' Day, Cory	April	½-1	1½ ft.	2 ft.	35	Like cabbage; tie leaves or paper over heads	Corn, early.
Onion Sets		May 10-20	2	3 ft.	3-4 ft.	½ pt.	Start in April on sods under glass. [to blanch	Onion Sets.
Peas		April-May 15	1-2	2-4 in.	15 in.	2 pt.	Rich soil; top-dress with ashes or nitrate.	Peas.
Crops in Sec. II.		April 1-May 1	2	2-4 in.	3 ft.	1 pt.		Crops in Sec. II.
		IV. CROPS THAT MAY FOLLOW OTHERS						
Beet, late		July-August	2	3-4 in.	15 in.	1 oz.		Beet, late.
Borecole		May-June[2]	½-1	2 ft.	2½ ft.	25		Borecole.
Broccoli		May-June[2]	½-1	2 ft.	2½ ft.	25	WARNING: Firm seeds and plants in dry	Broccoli.
Brussels Sprouts.		May-June[2]	½-1	1½ ft.	2½ ft.	35	soil. Destroy all weeds early. Cultivate sur-	Brussels Spr'ts.
Cabbage, late	Succession. Danish Ballhead, Drumhead Savoy, Mammoth Rock (red)	May-June[2]	½-1	2½ ft.	2½ ft.	25	face of soil, weeds or no weeds, every ten days—as nearly as possible. Fight bugs and beetles, or—take the consequences.	Cabbage, late.
Cauliflower		May-June[2]	½-1	2 ft.	2½ ft.	25		Cauliflower.
Celery, seed	White Plume, Golden Self-blanching, Winter Queen	April	½	1-2 in.	1 ft.	1 oz.	Sow in finely prepared bed; keep clean; trim	Celery, seed.
Celery, plant	White Plume, Golden Self-blanching, Winter Queen	July 1-Aug. 1....	..	6 in.	3-4 ft.	100	off to make stocky plants.	Celery, plant.
Endive[4]	Broad-Leaved Batavian, Giant Fringed	April-August	½	1 ft.	1 ft.	½ oz.	Blanch by tying up leaves or covering with	Endive.
Peas, late	Gradus	May 15-Aug. 1...	2-3	2-4 in.	4 ft.	1 pt.	shingles.	Peas, late.
Crops in Sec. II.							Ground apt to be dry; firm newly set plants.	Crops in Sec. II.

RECORD

SOWN OR PLANTED

VARIETIES

[1]In the vicinity of New York City. Each 100 miles north or south will make a difference of 5 to 7 days later or earlier.

[2]This is for sowing the seed. It will take three to six weeks before *plants* are ready. Hence the advantage of using the seed-bed. For instance, you can start your late cabbage about June 15th, to follow the first chop of peas, which should be cleared off by the 10th of July.

[3]Distances given are those at which the growing *plants* should stand, after "thinning." Seed in drills should be sown several times as thick.

[4]Best started in seed-bed, and afterwards transplanted; but may be sown where wanted and afterward thinned to the best plants.

To use this table to best advantage, first cut the page carefully from the magazine. Then cut between the two lines at the right that separate the table proper from the "record" heading strip. Mount these two on a piece of cardboard or heavy paper, so that the heading strip mentioned will continue the list of headings to the right, giving, on the blank paper or mount below it, a space for your own notes. Prolong the short vertical lines of this record heading strip to the bottom edge of the table and the horizontal line just below this note to the right to complete the rectangle.

VEGETABLE GARDENS



Orderliness is one of the essentials in the vegetable garden for appearance sake as well as for convenience. The racks at the left are for tomato vines



A row of quick-growing castor beans supplies a screen that will secure privacy in the small garden



Another model of neatness. Space your rows in multiples of a definite unit so as to save constant readjustment of the wheel hoe



Perhaps a tool-house is beyond you just now, but have a dry place for tools and keep them bright



Tomato vines trained on a wall lattice save space



In this old Connecticut garden fruit trees are set on the path axis where their shade is acceptable



Pulverize the soil by a backward-and-forward motion of the rake

(*Continued from page 244*)

make a list of the vegetables you want in your garden and the amount (in number of rows) of each. This will take only a few minutes; and it will not require many more to rule off your garden plan accordingly. Be careful to keep crops that remain the entire season in one place and tall-growing things like corn to the north of low ones, like beans. This will give you a planting plan similar to the one illustrated in the January issue. The advantage to be derived from the plan is that you will know exactly what will be required for your garden during the entire season. Mount this plan along with the Guide and Record on a large sheet of cardboard or stiff paper, and your campaign for the whole season is mapped out; and in addition you have a convenient and easily kept record of the garden work, which will assist you wonderfully in planning next year's garden to produce maximum results and minimum waste.

From your planting plan and the table you will know just what seeds to order, and this should be done at once. You will know also just what vegetable plants you will need. If you can, get them directly from the man who grows them, as they will be in better condition and you will have a larger stock from which to select. Don't pick out the largest and greenest. Take the stocky ones, that have been well hardened off. Even if a few leaves are purple there is no harm done.

With the seeds in hand and the plants procured, and the soil in seed-bed and plant-bed properly enriched and prepared, you are ready to begin the planting of your garden. Make up your mind first of all to have every row straight as a string. Get a stout cord of suitable length and mark off the rows by means of this. It may take more time to line them off in this way instead of putting them at random, but you will be saving time because of the greater ease with which weeding and hoeing, especially wheel hoeing, may be accomplished. Besides this the appearance warrants the delay.

The matter of seed-sowing is, of course, an important one. The seed should, as a rule, be sown at a depth of about five times their diameter. They should be covered evenly, either with the hoe or by drawing the back of a rake across the rows. The row should be firmed on top lightly with the back of the hoe, to show where it is, in order that cultivating may begin before the seeds come up, and each variety should be tagged, using a garden label or strip of lath or shingle. If the soil is dry, firm the seed in the drill before covering, with the ball of the foot or hoe blade. For more detailed instruction in regard to seed-sowing read carefully the Garden Department on page 270.



The setting of plants is no less important—and no less frequently performed in a careless way. Perhaps it would be better to say a wrong way, for the inexperienced planter is more than likely to take too much care in setting out plants. He handles them as though they were glass, cutting them carefully out of the box or breaking the pots in which they grow, in order that they may not be injured. He excavates a neat little hole with the trowel and places a plant gingerly in it, filling the soil in gently and possibly heaping it up about the stem in order to make the plant stay upright. And after all this care, they wilt in the noon sun and half of them die! "Beginner's luck" is not frequently met in gardening. If you want your plants to live and "take hold" at once, you must dispense with these trained-nurse methods. First of all, you should have your soil in such fine condition that you can make holes with your hand or with the dibble. Secondly, if they are at all tall and green, with the leaves inclined to flop, shear off the upper half of the leaves. Then set them in the soil to about half the length of the stem—more, if they are spindling or long-stemmed. With the thumbs and backs of the fingers press the soil around them evenly; press it down hard! Then, when you get to the end of the row, unless the soil is very damp, go back over the row and press down each plant still more firmly by placing the balls of the feet close to the stem and letting your weight come evenly upon both sides at once. After the plants are so set, rake the whole space over evenly to restore the soil mulch of fine loose earth on the surface. Plants so set will live. If the ground is so dry when setting that they must be watered, water before all the soil is put about them, or in the holes before planting, not on the surface. If the planting is followed by very hot, dry weather, protection may be given by placing a half sheet of newspaper over each plant, like a miniature tent and holding it in position with stones or earth. If manure or fertilizer is applied in the hill, or directly to each plant, see that it is thoroughly mixed with the soil before wetting the plants; otherwise it is likely to burn the roots.



In transplanting your plants from the seed-bed do not be afraid of hurting them

Different vegetables, because of their different habits of growth, are planted in different ways—some in hills, some in rows, some in drills. The accompanying Guide indicates the usual method of growing each of the ordinary garden vegetables. In hills, which are usually several feet apart each way, several seeds are planted and sometimes thinned out to two or more of the best plants—as with cucumbers and melons, or all left, as with corn. It was formerly the custom in hill culture to draw the earth up into a sort of mound or hill about the plants, but this practice has rather given

(*Continued on page 277*)





With the knowledge gained by a very little study of grass seed properties you will know what to sow in sunny and in shady places to give an evenly covered lawn

Grass Seed Mixtures and How to Use Them

THE SIMPLICITY OF THE APPARENTLY COMPLEX MIXTURES OF LAWN SEEDS—WHAT TO USE FOR SHADY, HILLY AND MOIST PLACES—HOW TO HAVE A REALLY GOOD LAWN

BY LUKE J. DOOGUE

Photographs by Henry Fuerman, N. R. Graves and others

SO much has been written on the subject of lawn-making that about everyone interested in this work is fully competent, theoretically at least, to carry through the process of land renovation and preparation, whether it be for a small lawn or an area consisting of acres. The subject along these lines has been very exhaustively treated, but, strange to say, the equally important subject of grass seed has been rather neglected. While many amateurs can talk freely on the preparation of the land, they are not so confident when treating of grass seed. It seems strange that this is the case when so much depends on the suitability of the grass seed to the land for the making of a successful lawn. The only reason, as far as I can see, why people are not versed in this matter is that they have been frightened by the botanical names of grasses, which seem wholly unsuitable, and too difficult of pronunciation, for such commonplace things. There is, however, just as much individuality in a plant produced from a grass seed as in the choicest plant in a greenhouse. One kind of grass seed will produce a low-growing plant while another grows high; one wants a moist situation, another a dry one; some will germinate in the shade, others will not, and so on through the list. If a person knows each kind and its possibilities and requirements he will be able to choose the grass best suited for his wants, and by careful trials arrange the mixtures with better success than the man in the wholesale house who is obliged to guess at what is best for his wants. Start out, then, in the primer class and tabulate some of the best grasses used for lawns and tag them with both their names, the botanical and the common ones.



Take apart your lawnmower before the spring rush starts to clean and oil

Kentucky Blue Grass—*Poa pratensis.*—Fine for lawns; grows slowly but vigorously almost everywhere but on an acid soil.

Red top—*Agrostis vulgaris.*—Shows results more quickly than blue grass; will thrive on a sandy soil; fine in combination with blue grass.

English rye grass—*Lolium perenne.*—Grows quickly and shows almost immediate results; good to combine with the slow-growing blue grass.

Various-leaved fescue—*Festuca heterophylla.*—Good for shady and moist places.

Rhode Island bent—*Agrostis canina.*—Has a creeping habit; good for putting-greens, sandy soils.

Creeping bent—*Agrostis stolinifera.*—Creeping habit; good for sandy places and to bind banks or sloping places. Combined with Rhode Island bent for putting-greens.

Crested dog's-tail—*Cynosurus cristatus.*—Forms a low and compact sward; good for slopes and shady places.

Wood meadow grass—*Poa nemoralis.*—Good for shady places; is very hardy.

Red fescue—*Festuca rubra.*—Thrives on poor soils and gravelly banks.

White clover—good for slopes; not to be recommended for a lawn.

Sheep fescue—*Festuca ovina.*—Good for light, dry soils.

Now, with so much as a reference library, you will have sufficient knowledge of the kinds of seeds to draw from to make combinations that will fit any situation. I would further suggest that you go to a wholesale house and get a sample of each of these seeds and examine them. Get just a little of each in an envelope. Make a comparative examination of the seeds, holding a little in the palm of the hand. As you look at each seed repeat its name a few times and recall its characteristics, and you will be surprised to find that on the second or third trial every name will suggest itself the moment your eyes rest on the seed. With a knowledge of the seeds you can then go to your dealer and tell him what you want—not necessarily what he thinks you want. You are then a better judge than he is.



For steep banks, white clover, creeping bent, sheep fescue and Rhode Island bent, with the old stand-by, Kentucky blue grass, will fill the bill

It is worth while following the subject farther, for the results will more than repay the trouble. Test the seeds. Make shallow boxes and fill them with loam and sow each kind of seed just as you would on a lawn. Put a label at the head of the box and on it the time of sowing the seed. Do this with as many as you can. Then watch and make notes of the time it takes for germination. Note this and also the character of the blades. Having finished this you will have a very liberal education in the subject of grass.



Here is a coarse mixture of many things, including probably a large quantity of "sweepings"



A flat-bladed knife, notched for weeding



Dandelion appears along the edge. Deep digging with a knife by hand is the only way to get it out

Should you not care to do as suggested above you will be dependent on others to get what you most need. If you should go to a dozen people and ask them to suggest a combination of seeds they would all give them readily to you, but no two proportions would be alike. If you should ask for a single grass the majority would suggest Kentucky blue grass. For a single grass there is nothing better suited for all conditions. There is this objection to it, however: it is not a nervous man's grass. You cannot plant it today and have a lawn next month. If you can afford to wait, sow Kentucky blue and your patience will be well rewarded. It makes a permanent lawn.

To introduce the ready-made lawn, use a combination of Kentucky blue, red top and English rye. The blue grass is slow, but the rye and red top produce speedier results. The first month will see the newly seeded space a carpet of green. In time the rye passes, the red top continues to cover, while the blue grass grows sturdier each day until it crowds everything out by virtue of its own strength. Use twelve pounds of Kentucky blue grass, five pounds of red top and three pounds of English rye grass to the bushel, and sow three and one-half to four bushels to the acre. This makes a reliable combination.

It is common to hear people asking for grass that will grow in shady places, but it is always difficult to determine the degree of shade. A place may be shaded and yet suitable for growing grass, or it may be so shaded that no grass known could be made to germinate there. In places where there is no heavy dripping and where the ground is not absolutely dark, use the following:

(*Continued on page 278*)



A scheme of garden paths that saves labor in mowing, as the lawnmower may be run directly over the stones, leaving no edges to be trimmed



The white foxglove is an invaluable harmonizer for the June border, being particularly effective as a background for Sweet William

Color in the Flower Garden

THE ONLY WAY IN WHICH THE AMATEUR MAY HOPE TO AVOID THE CLASH OF INHARMONIOUS COLORS IS BY A PLENTIFUL AND JUDICIOUS USE OF WHITE FLOWERS

BY ADELINE THAYER THOMSON

Photograph by the author and others

THE element that finally determines the success or failure of a garden is the color harmony between the flowers—or the lack of it. No greater problem, however, confronts the gardening enthusiast. The amateur, thinking that a satisfying color scheme can be developed only after years of intimate study among the flowers themselves, frequently fails to make even the effort towards such a far-off ideal. The well seasoned garden enthusiast, too, is apt to become careless and even discouraged when, time after time, his flowers fail to come true to type, spoiling the carefully planned effect he has worked out; or important elements in his composition refuse to thrive.

It seems rather hopeless, does it not? And yet there is a solution of the problem for the veriest tyro—a sure way out of the whole difficulty: *Use white-flowering plants in profusion.* A judicious mixture of white masses among the colors will reconcile the most inimical neighboring plants, and will show off to the very best advantage those blooms which, by reason of their delicacy of coloring, are thrown into obscurity by blatant companions.

Both annual and perennial classes are rich in white-flowering types. After using many of these in my garden, however, I find that some of the varieties combine characteristics making for practical usefulness in color adjustment with rare decorative quality and attractiveness in a greater degree than do others. For convenience in planting, these varieties are named in connection with the month of flowering.

The early spring display among the hardy plants, it will be remembered, is painted in shades of pink, purple, magenta, and yellow. A color scheme full of beauty, to be sure, under tasteful treatment, but when carelessly blended presenting only a tangled mass of warring discord. Four splendid white-flowering perennials that are warranted, if planted generously, to keep the garden in accord throughout April and most of the month of May, are blood-root, *Arabis alpina, Iberis,* and *Phlox sublata.* For the latter half of May, two white types of the German iris—Florentine Alba and Bridesmaid—give invaluable service. Not only are these varieties useful in reconciling the many-hued blossoms of their own stately tribe, but grouped among columbines of too contrasting shades, or companioned with the lovely but trying pink pyrethrums and peonies, these white irises give very pleasing results.



A long and prolific flowering season is the useful attribute of the Shasta daisy in separating warring colors

The scarlet Oriental poppy, possessing such striking decorative qualities, but so often ruining entire planting schemes because of clashing combinations, may be used with perfect safety if *Valeriana officinalis*—garden heliotrope—is massed in nearby profusion. The wealth of cool green leaves, and the tall, fleecy flower spikes yielded by this old-time June favorite, act as a foil for the startling brilliancy of the poppies, and rather enhance than detract from their glory. Valerian is also useful among peonies, inclining towards the cerise coloring. Another rare treasure for the June pageant is that grand early-flowering phlox—Miss Lingard. The wonderful trusses of bloom held high above dark foliage bring the exquisite purity of Miss Lingard always into conspicuous notice, and the most unruly colors offer no terrors when they are placed under the guardianship of this grand harmonizer. Two other hardy plants, adapted for practical help among the gay June blossoms, are the chaste Madonna lily—useful among the delphiniums and spiderwort—and the white foxglove—invaluable with plantings of Sweet William and for making harmonious background effects.

July is the trying month in the hardy garden or border. Many of the perennials, having completed a rich harvest of bloom, are cut back to the ground in order that a second flowering period may be attained later. The plants coming into flower, too, are deeper in coloring and more trying to place in harmonious relations; the shades of orange, chrome, blue and cerise largely predominating. If real beauty is realized during this time, the key unlocking its success is the employment of white flowers; white flowers used not sparingly, however, but in *quantities!* Among the plants yielding white blooms for the July garden none are more decorative or desirable than the glorious white forms of the Japanese iris. Eclaire and Gold Bound are standard varieties that are hard to equal. The Shasta daisy possesses a long and prolific flowering season and is very satisfactory for general massing effects among the conflicting colors of this time, and for group planting also, among the scarlet *Lychnis, Lobelia cardinalis,* and the yellow coreopsis and gaillardia. *Gypsophila paniculata,* fairly smothered under its harvest of tiny white flowers, adds, too, a decided charm to this midsummer display. Crowded in among the posies here, there and everywhere, an atmosphere of soft coloring is diffused by this plant that is almost ethereal in character. *Achillea* the pearl, and campion are two other hardy varieties for this trying time, as also the two annuals, Empress candytuft and sweet alyssum.

Perennial phlox is queen of the August clans. Jeanne d'Arc, Bridesmaid and White Lady are exquisite white types that cannot be too highly recommended. *Pyrethrum uligosum,* a rank grower perfecting hundreds of large daisies, tones and softens the burning yellow hues of the *Helianthus* and golden marguerite, now in full flower. The annual nicotiana is a useful and happy plant for massing wherever a place may be found for its starry blossoms. Princess Alice, and Madam Rivoire—white types of the ten-weeks-stock—the Queen Victoria snapdragon, and the many kinds of white asters, are annuals too, without which no August array of blossoms is complete.

September brings a rich supply of white feathery hardy asters, and that charming woodsy wild plant—the boneset; both being unusually graceful and delightful for mingling among the deep purples and yellows borne by the flowers of early autumn. A fine harmonizer, as well, is the hardy vine, *Clematis paniculata.* White verbenas, asters, Japanese anemones and chrysanthemums from now on also may be relied on to keep the peace.



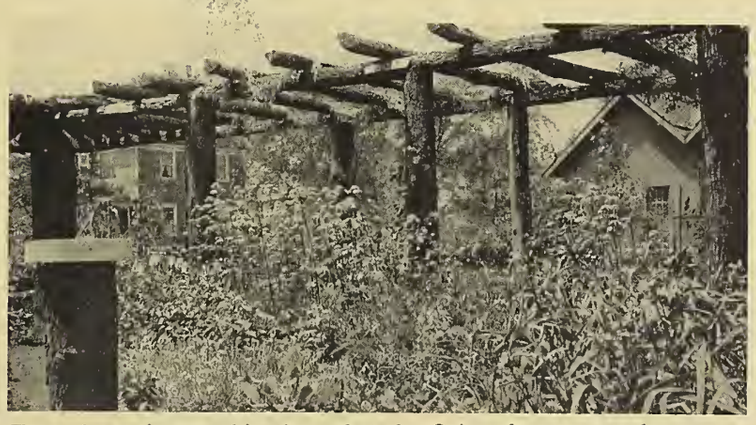
In August the starry white nicotiana comes to the rescue, together with the ever-useful sweet alyssum



Eclaire and Gold Bound are white varieties of the glorious Japanese iris that will help to prevent discord in July



No collection of plants will clash if Clematis paniculata masses its snowy bloom in the background



Even the trying combinations that the Oriental poppy produces may be made welcome in combinations with Valeriana officinalis



By all means invest a few dollars in a combination wheel hoe, hill and drill seeder, cultivator and plow combined



With a double wheel hoe you can cultivate both sides of a row of plants at once and as quickly as you can walk

Garden Tools That Pay Their Way

THE IMMENSE SAVING OF LABOR THAT MAY BE BROUGHT ABOUT BY A JUDICIOUS INVESTMENT IN THE RIGHT KINDS OF GARDENING IMPLEMENTS

BY FREDERIC DE ROCHEVILLE

Photographs by E. R. Rollins, the author and others

IF all people who have no gardens of their own knew how the labor of gardening has been lessened by modern implements this year, there would be several hundred thousand tons less of stale and wilted vegetables carted, hauled, stored, handled, jounced about, and delivered to and through the market.

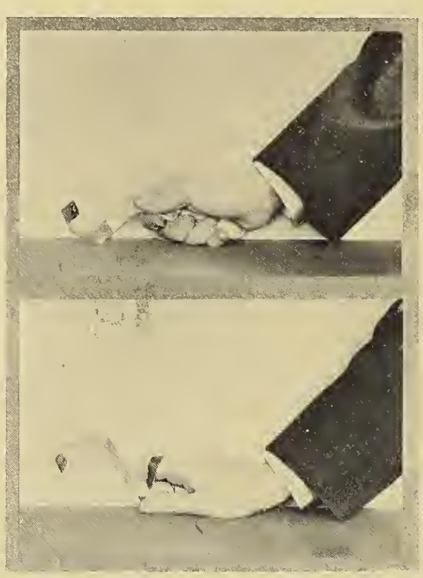
Your modern gardener is not necessarily bent at the knees and bowed at the shoulders, with knuckles the size of a stump-rooted carrot. He may even, if he is fool enough to prefer style to comfort, perform many of the garden operations that erstwhile were drudgery, in creased trousers and a clean white collar.

While some garden tools have been improved and developed out of all resemblance to their original forms, others have changed little in generations and in all probability will remain ever with us. There is a thing or two to say about even the simplest of them—especially to anyone not familiar with their uses, and so I shall go through the whole list.

There are tools for use in every phase of horticultural operations; for preparing the ground, for planting the seed, for cultivation, for protecting crops from insects and disease, and for harvesting. It is with the first three of these only, however, that the present article deals.

First of all comes the ancient and honorable spade, which, for small garden plots, borders, beds, etc., must still be relied upon for the initial operation in gardening—breaking up the soil. There are several types, but any will answer the purpose. In buying a spade, look out for two things: see that it is well strapped up the handle, in front and back (see illustration), and that it hangs well. In spading up ground, especially soil that is turfy or hard, the work may be made easier by taking a strip not quite twice as wide as the spade, and making diagonal cuts so that one edge of the spade at each thrust cuts clean out to where the soil has already been dug. The wide-tined spading-fork is frequently used instead of the spade, as it is lighter and can be more advantageously used to break up lumps and level off surfaces. In most soils it will do this work as well as, if not better than, the spade, and has the further good quality of being serviceable as a fork too, thus combining two tools in one. It should be more generally known and used. With the ordinary fork, used for handling manure and gathering up trash, weeds and so forth, every gardener is familiar. The type with oval, slightly upcurved tines, five or six in number, and a "D" handle, is the most convenient and comfortable for garden use.

For areas large enough for a horse to turn around in, use a plow. There are many good makes. The reversible type has the advantage of turning all the furrows one way, and is the best for small plots and sloping ground. It should turn a clean, deep furrow. In deep soil that has long been cultivated, plowing should, with few exceptions, be down at least to the subsoil; and if the soil is shallow it will be advisable to turn up a little of the subsoil at each plowing—not more than an inch, in order that the soil may gradually be deepened. In plowing sod it will be well to have the plow fitted with a "coulter," which turns a miniature furrow ahead of the plowshare, thus covering under all sod and grass and getting them out of the way of harrows and other tools to be used later. Where drainage is poor it will be well to break up the subsoil with a subsoil plow, which follows in the wake of the regular plow, but does not lift the subsoil to the surface.



A type of hand-weeder that the author has found most convenient

The spade or spading-fork will be followed by the hoe, or hook, and the iron rake; and the plow by one or more of the

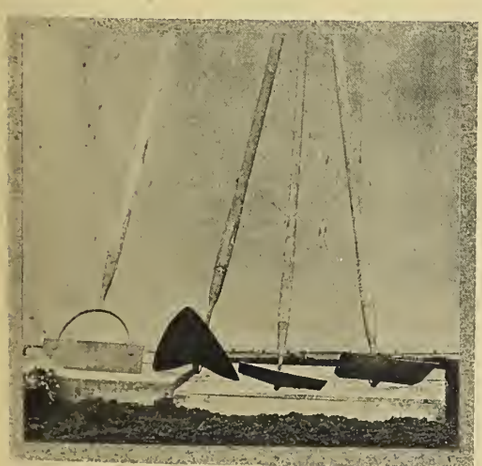
various types of harrow. The best type of hoe for use after the spade is the wide, deep-bladed type. In most soils, however, this work may be done more expeditiously with the hook or prong-hoe (see illustration). With this the soil can be thoroughly pulverized to a depth of several inches. In using either, be careful not to pull up manure or trash turned under by the spade, as all such material will quickly rot away in the soil and furnish the best sort of plant food. I should think that our energetic manufacturers would make a prong-hoe with heavy side blades, like those of the spading fork, but I have never seen such an implement, either in use or advertised.

What the prong-hoe is to the spade, the harrow is to the plow. For general purposes use one that is adjustable; and for ground at all mellow it will be the only one necessary. Set it, for the first time over, to cut in deep, and then for leveling, it will leave the soil in such excellent condition that a light hand-raking (or, for large areas, a good smoothing harrow) will prepare it for the finest of seeds, such as onions and carrots. Of disc harrows there are a great many makes. The salient feature of the disc type is that it can tear up no manure, grass or trash, even when these are but partly turned under by the plow. For this reason it is especially useful on sod or other rough ground. The best and most convenient harrow for putting on the finishing touches, and for leveling off and fining the surface of the soil, is the lever spike-tooth type. Any of the harrows mentioned above (except one or two makes of smoothing harrows), and likewise the prong-hoe, will have to be followed by the iron rake when preparing the ground for small-seeded garden vegetables. Get the sort with what is termed the bow-head (see illustration) instead of one in which the head is fastened directly to the end of the handle. It is less likely to get broken and easier to use. There is quite a knack in manipulating even a garden rake, which will come only with practice. Don't rake as though you were gathering up leaves or grass. The secret in using the garden rake is *not* to gather things up. Small stones and lumps of earth, and so forth, you of course wish to remove. Keep these raked off ahead of where you are leveling the soil, which is accomplished with a backward-and-forward movement of the rake.



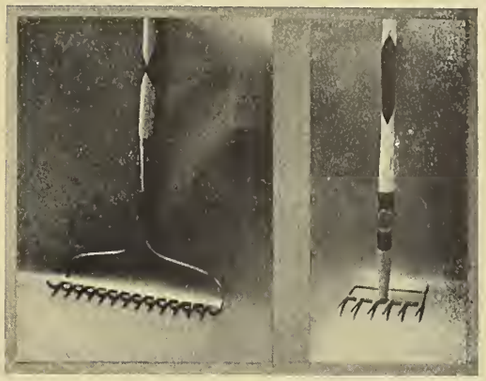
The spading-fork deserves to be better known

The tool-house of every garden should contain a seed-drill. Labor which is otherwise tedious and difficult is rendered by it mere play, and it is done better. The operations of making the row, opening the furrow, dropping the seed at the proper depth and distance, covering immediately with fresh earth, and firming the soil, are all done at one swoop and as fast as you can walk! It will even drop seeds in hills, nor is this all: it may be had as part of a combination machine, which, after your seeds are planted—with each row neatly rolled on top and plainly visible—may be at once transformed into a wheel-hoe, that will save you as much time in caring for your plants as the seed-drill did in planting your seed. With this equipment hoeing drudgery disappears.



Four types of hoe: the scuffle, the heart-shaped, the short and the common hoe

The attachments which may be had for such an implement are so many and so varied in usefulness that it would require an entire article to detail their special advantages and methods of use. The catalogues describing them will give you many valuable suggestions; and other ways of utilizing them will discover themselves to you in your work.



Select a bow-head rake rather than one in which the teeth-bar is fastened directly to the shaft. At the right is the prong-hoe

Valuable as the wheel hoe is, however, and varied in its scope of work, the time-tried hand hoe cannot be entirely dispensed with. An accompanying photograph shows four distinct types, all of which will pay for themselves in a garden of moderate size. The one on the right is the one most generally seen; next it is a modified form which personally I prefer for all light work, such as loosening soil and cutting out seeds. It is lighter and smaller; quicker and easier to handle; next this is the Warren, or heart-shaped hoe, specially valuable in opening and covering drills for seed, such as beans, peas or corn. The scuffle hoe, or scarifer, which completes the quartet, is used between narrow rows for shallow work, such as cutting off small weeds and breaking up the crust. It has been less frequently needed since the advent of the wheel hoe, but when crops are too large to admit of the use of the latter, the scuffle hoe is still an indispensable time-saver.

There remains one task connected with gardening that is a bugbear. That is hand-weeding. To get down on one's hands and knees in the blistering hot dusty soil, with the perspiration trickling down one's nose, and pick small weedlets from among tender plantlets, is not at all a pleasant recreation. There are, however, several sorts of small weeders which lessen the work considerably. One of the many types is shown herewith. One type or another will seem preferable, according to different conditions of soil and methods of work. Personally, I prefer the one illustrated for general use. The angle blade makes it possible to cut very near to small plants, and between close-growing plants; while the strap over one finger leaves fingers free for weeding without dropping the instrument.

There are two things to be kept in mind about hand weeding which will reduce this work to the minimum. First, never let the weeds get a start, for even if they don't increase in number, if they once smother the ground or the crop you will wish you had never heard of a garden. Second, do your hand weeding while the surface soil is soft, and the weeds come out easily. A hard-crusted soil will double and treble the amount of labor required.

When garden tools are such savers of labor, it would seem needless to suggest that they should be carefully kept in repair and always bright, clean and sharp. But such advice is needed, to judge by most of the tools one sees. Always have a piece of cloth or old bag on hand where the garden tools are kept, and

(*Continued on page* 280)



You can grow ivy in boxes out in the garden, bringing them up on the porch when the vines have made sufficient growth



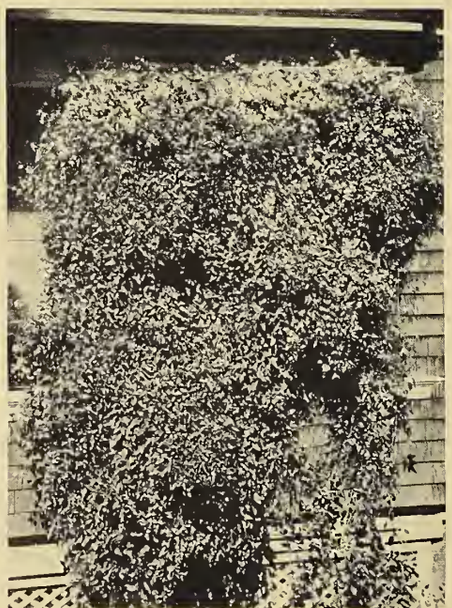
Boxes of ivy have been placed on the stone wall of porch, from which the vines hang down to drape the wall inside and out



The morning-glory is not exacting as regards soil or site



English ivy has been trained upon the trellis of this loggia from boxes of rich moist soil

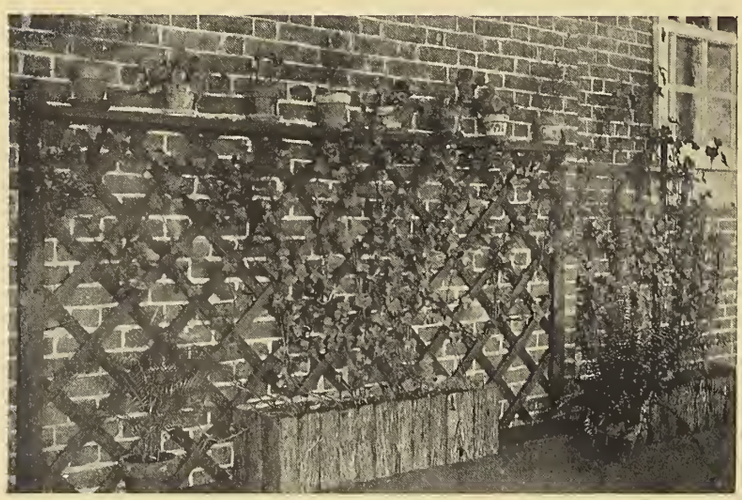


The only trouble with clematis is the bareness of its lower branches, which should be screened



Clematis Jackmani comes in purple, red, blue and white

PORCH VINE SUGGESTIONS



An interesting treatment of the wall at the back of a porch—a surface that is too frequently neglected



A variety of trellis treatments may be worked out with lath, painted white or stained green





In order to be able to supply your garden soil with the elements of plant food it really needs you will have to keep a record of production under various conditions, and then mix your fertilizers in the proper proportions to suit. Break up all lumps and mix the ingredients by hoeing in a box

The Fertilizer Problem and the Amateur

WHAT SORT OF PLANT FOOD THE GARDEN SOIL NEEDS—WHEN AND HOW TO GIVE IT—MIXING YOUR OWN FERTILIZERS—SOME CONVENIENT FORMULAE

BY M. ROBERTS CONOVER

Photographs by the author

THE garden soil is not an inexhaustible storehouse from which toothsome vegetables are yielded year after year with no return of plant food. The time spent in cultivation and planting is an investment yielding return in proportion to the hidden resources of the soil—and these resources are directly affected by the crops produced therefrom.

Too frequently the amateur gardener feels that the whole fertilizer problem is solved for him if he dumps a cartload or two of old manure over the garden, in the fall or in the spring, and lets it go at that. And in the majority of cases it will serve to stimulate a fairly presentable growth. If, however, you want to excel in your garden activities and really produce a maximum of yield and quality you will need to investigate this matter of fertilizers further.

You will find that a timely and judicious application of one of the chemical fertilizers—the immediately available kinds of plant food—will supply just that most needed element that the plant craves. Instead of reaping the average commonplace crop you will have entered the record class. Such a desirable result, however, can follow only after the amateur is willing to spend a little time and study on this problem of plant foods and plant stimulants.

As a general principle those garden crops which have the greatest nutritive value remove from the soil a greater amount of plant food than those lower in the scale of foods. To this, beans and peas are exceptions. These nourishing vegetables leave the soil richer in nitrogen and do not require supplies of soil nitrogen during their growth.

Nitrogen, potash and phosphates must be supplied to the garden soil before it is taxed for another crop, and while the proportions of these chemicals favorable to good plant growth may be ascertained, gardening is not so exact a science that all the elements applied can be accounted for in the soil or in the crops.

The elements of plant food removed by growth are returned to the soil in the various kinds of animal waste—manure, different forms of bone, etc., in mineral compounds, green manures, and a very small proportion in the unedible parts of vegetable growth which enter into composts.

The elements contained in these substances are released as plant food, rapidly or gradually according to the form in which they are applied. On garden soil where rapid growth and two or more crops are demanded, fertilizers which decompose quickly are absolutely essential. Of the various kinds of animal waste, poultry manure ranks first in this respect, if it has been kept under shelter and its nitrogen preserved by layers of earth and dustings of land-plaster during its accumulation.

A garden fertilized by being spread with twelve tons of this manure to the acre will surpass in its yield an equal area dressed with stable compost.

Stable manure is valuable for later effect after decay has liberated its elements. When applied fresh it is very injurious to delicate plants. If, however, it is thoroughly mixed with the soil by plowing and harrowing, this trouble is obviated. In this form it is beneficial to plants after three or four weeks. Old rotted manure is used in direct contact to plants without injury. If in addition to a heavy dressing of manure, quick-acting fertilizers are applied as they are needed by the plants, the garden soil is well stocked for a season's cropping.

The use of green manure has an effect somewhat similar to the compost. It is supplied by planting some such crop as rye or clover upon the soil, allowing it to grow to a height of several inches and plowing it under. This replaces in the soil the elements used in growth and improves its mechanical condition by supplying humus. Leaves and tobacco stems have excellent fertilizing qualities also.

Quick-acting fertilizers whose elements are in proportions suited to different vegetables are procured from dealers at prices averaging about three cents a pounds, and these give satisfactory results with judicious use. These may be distributed along the row beneath the seed, mixing well with the soil, or such fertilizers may be worked into the soil at one side of the vegetables after they have begun growing. Nitrate of soda, used to stimulate

plant growth, is applied by a sprinkling on the surface of the soil beside the plants. It must not touch the foliage and it should not be covered, as its tendency is to work downward.

Fertilizers that are readily available as plant food are more expensive and, merely from an economical standpoint, their composition should be suited to the individual needs of the plants. For instance, beans and peas do not need nitrogen, but they do want lime and potash. Beets want all three elements in abundance. Turnips require phosphates in large proportions and potatoes and fruits require potash.

By keeping a careful record of the conditions which attend certain results, the gardener can learn to know the deficiencies of his soil and thus give it the plant food it requires. To do this one will need to prepare his own fertilizers. In handling fertilizers one should wear gloves to protect the hands from poisonous or caustic ingredients. The various fertilizing substances which have formed into lumps must be reduced at least to the consistency of coarse salt by pounding or sifting before they can be mixed. In mixing, the ingredients are spread in layers and then turned over with a shovel or hoe until evenly distributed.

Nitrate of soda, especially, and other chemical fertilizers besides, should be used as soon as possible after their purchase, as they lose value by contact with the air.

Nitrate of soda, when applied alone, has an immediate effect upon growing plants—it will not remain in the soil, but works down through it with no benefit to plant growth if applied before it can be taken up by the root system.



One of the greatest and at the same time cheapest ways of fertilizing the garden is by sowing rye or clover in the fall and plowing it under when several inches high



Broadcasting a compost of stable manure over the soil will do much good usually, but do not consider it the beginning and end of the fertilizer problem

The following fertilizers are adapted to the peculiar needs of certain vegetables: For sweet potatoes, in quantity to fertilize one-twentieth of an acre, eight pounds of muriate of potash, two and one-half pounds of available phosphoric acid, twenty pounds of acid phosphate and twelve pounds of nitrate of soda. This is mixed with the soil before the plants are set.

For asparagus, one part sulphate of ammonia and two parts muriate of potash, applied in the row over the crowns, using about fifty pounds on one-twentieth of an acre.

For tomatoes, on a similar area, five pounds of nitrate of soda, eight and one-half of bone tankage, five pounds of acid phosphate and six pounds of muriate of potash, will furnish the right proportions for growth on ordinary garden soil.

Onions require heavy feeding. Twenty pounds of nitrate of soda, fifteen pounds of muriate of potash and twenty pounds of bone meal make a suitable mixture. Two applications, just before planting, and at the side of the row about a month later, give satisfactory results.

In soil supplied with nitrogenous material, the fruit trees and bushes will mature fine crops of fruit if early in the season they are given a fertilizer of two parts muriate of potash and three parts ground bone, using eight hundred pounds to the acre.

But whether you choose a liquid or solid, chemical or natural mixture, one of the greatest factors for success is continual activity. After it is spread see that it is so thoroughly turned that it



Apply nitrate of soda along the sides of rows, when the plants need an immediate stimulus



Some of the chemical fertilizers are applied in the rows before the seeds are sown

Grow Your Own Fruit

III. THE CARE OF TREES AFTER THEY ARE SET OUT—INSECT AND FUNGOUS PESTS—WHEN THEY APPEAR AND HOW TO COMBAT THEM MOST EFFECTIVELY

[Mr. Rockwell's series of articles that appeared last year in these pages, under the title "Grow Your Own Vegetables," met with so many expressions of appreciation that we are doubly glad to follow it with three articles on an equally important phase of the home garden. The first article, which appeared in the February issue, took up the important matter of selecting the varieties best suited to the needs of the home orchard; the second article, in March, told how and when to plant, prune and cultivate.—EDITOR.]



BY F. F. ROCKWELL

Photographs by E. F. Hall and others

THE day has gone, probably forever, when setting out fruit trees and giving them occasional cultivation—"plowing up the orchard" once in several years—would produce good fruit. Apples and pears and peaches have occupied no preferred position against the general invasion of the realm of horticulture by insect and fungous enemies. The fruits have indeed suffered more than most plants. Nevertheless there is this encouraging fact: that though the fruits may have been severely attacked, the means we now have of fighting fruit-tree enemies, if thoroughly used, as rule are more certain of accomplishing their purpose and keeping the enemies completely at bay than are similar weapons in any other line of horticultural work.

With fruit trees, as with vegetables and flowers, the most important precaution to be taken against insects and disease is to have them in a healthy, thriving, growing condition. It is part of Nature's law of the survival of the fittest that any backward or weakling plant or tree seems to fall first prey to the ravages of destructive forces.

For these reasons the double necessity of maintaining at all times good fertilization and thorough cultivation will be seen. In addition to these two factors, careful attention in the matter of pruning is essential in keeping the trees in a healthy, robust condition. As explained in a previous article, the trees should be *started* right by pruning the first season to the "open-head" or vase shape, which furnishes the maximum of light and air to all parts of the tree. Three or four main branches should form the basis of the head, care being taken not to have them start from directly opposite points on the trunk, thus forming a crotch and leaving the tree liable to splitting from winds or excessive crops.

If the tree is once started right, further pruning will give little trouble. Cut out limbs which cross or are likely to rub against each other, or that are too close together; and also any that are broken, decayed or injured in any way. For trees thus given proper attention from the start, a sharp jack-knife will be the only pruning instrument required.

The care of the old orchard is more difficult. Cutting out too many of the old, large limbs at one time is sure to give a severe shock to the vitality of the tree. A better plan is, first, to cut off—*close*—all suckers and all new small-growth limbs, except a few of the most promising, which may be left to develop into large limbs; and then as these new limbs grow on, gradually to cut out (using a fine-tooth saw and painting the exposed surfaces) surplus old wood. Apples will need more pruning than the other fruits; pears and cherries the least. Cutting back the ends of limbs enough to keep the trees in good form, with the removal of an occasional branch for the purpose of letting in light and air, is all the pruning they will require. Of course trees growing on rich ground, and well cultivated, will require more cutting back than those growing under poorer conditions. A further purpose of pruning is to effect, indirectly, a thinning of the fruit, so that what is grown will be larger and more valuable, and also that the trees may not become exhausted by a heavy crop.

In trees that have been neglected and growing slowly, the bark sometimes becomes hard and set. In such cases it will prove beneficial to scrape the bark and give a "wash," applied with an old broom. Whitewash is good for the purpose, but soda or lye answers the same purpose and is less disagreeably conspicuous. Slitting the bark on trunks and largest limbs is sometimes resorted to, care being taken to cut through the bark only; but such practice is objectionable because it leaves ready access to some forms of fungous disease and to borers.

Where extra fine specimens of fruit are desired, thinning is practised. It helps also to prevent the tree from being overtaxed by excessive crops; but where pruning is thoroughly done this trouble is usually avoided. Peaches and Japan plums are especially benefited by thinning, as they have a great tendency to overbear. The spread of fruit diseases, especially those not in the fruit itself, is also to some extent checked.



A spraying outfit is an absolute necessity. If you have few trees a small brass tank of knapsack type will do

Of fruit-tree enemies there are some large sorts which may do great damage in short order—rabbits and field-mice. They may be kept away by mechanical protection, such as wire, or heaping the earth up to a height of twelve inches about the tree trunk. Or they may be caught with poison baits, such as boiled grain in which a little rat-poison has been mixed. The former method for small gardens is little trouble, safer to Fido and Tabby, and the most reliable in effect.

Insects and scale diseases are not so easily managed: and that brings us to the question of spraying and of sprays.

For large orchards, the spray must, of course, be applied with powerful and expensive machinery. For the small fruit garden a much simpler and very moderate-priced apparatus may be acquired. The most practical of these is the brass-tank compressed-air sprayer, with extension rod and mist-spray nozzle. Or, one of the knapsack sprayers may be used. Either of these will be of great assistance not only with the fruit trees but everywhere in the garden. With care, they will last a good many years. Whatever type you get, be sure to get a brass machine, as cheaper ones made of other metal quickly corrode from contact with the strong poisons used.

The insects most commonly attacking the apple are the codlin moth, tent-caterpillar, cankerworm and borer. The codlin moth lays its eggs about the time of the falling of the blossoms, and the larvae when hatched eat into the young fruit and cause the ordinary wormy applies and pears. Owing to these facts, it is too late to reach the trouble by spraying after the calyx closes on the growing fruit. Keep close watch and spray immediately upon the fall of the blossoms, and repeat the spraying a week or so (not more than two) later. For spray, use Paris green at the rate of one pound, or arsenate of lead (paste or powder—less of the latter; see accompanying directions) at the rate of four pounds to one hundred gallons of water, being careful to have a thorough mixture. During July, tie strips of burlap or old bags around the trunks and every week or so destroy all caterpillars caught in these traps.

The tent-caterpillar may be destroyed while in the egg state, as these are plainly visible around the smaller twigs in circular, brownish masses. Upon hatching, also, the nests are obtrusively visible and may be wiped out with a swab of old bag or burned with a kerosene torch. Be sure to apply this treatment before the caterpillar begins to leave the nest. The treatment recommended for codlin moth is also effective for the tent-caterpillar.

The cankerworm is another leaf-feeding enemy and can be taken care of by the Paris green or arsenate spray.

The railroad-worm, a small white maggot which eats a small path in all directions through the ripening fruit, cannot be reached by spraying, as he starts life inside the fruit; but where good clean tillage is practised, and no fallen fruit is left to lie and decay under the trees, he is not apt to give much trouble.

The borer's presence is indicated by the dead, withered appearance of the bark, beneath which he is at work, and also by small amounts of sawdust where he entered. Dig him out with a sharp pocket-knife or kill him inside with a piece of wire.



Spray cherry trees when most of the blossoms are off, with arsenate of lead solution, 5 to 8 pounds to 100 gallons of water. Sour cherries are more easily grown than the sweet varieties.

The most troublesome disease of the apple, especially in wet seasons, is the apple scab, which disfigures the fruit, both in size and in appearance, as it causes blotches and distortions. Spray with Bordeaux mixture, 5-5-50 or 3-3-50 (see formulae below) three times just before the blossoms open; just as they fall; and ten days to two weeks *after* they fall. The second spraying is considered the most important.

The San José scale is, of course, really an insect, though in appearance it seems a disease. It is much more injurious than the untrained fruit-grower would suppose, because *indirectly* so. It is very tiny, being round in outline, with a raised center, and only the size of a small pin head. Where it has once obtained a good hold, it multiplies very rapidly, makes a scaly formation or crust on the branches, and causes small red-edged spots on the fruit. For trees once infested, spray *thoroughly,* both in the fall, after the leaves drop, and again in the spring, *before* growth begins. Use lime-sulphur wash, or miscible oil, one part to ten of water, thoroughly mixed.

Sour cherries are more easily grown than the sweet varieties, and are less subject to the attacks of fruit enemies. Sweet cherries are troubled by the *curculio,* or fruit worm, which attacks also peaches and plums. Cherries and plums may be sprayed, when most of the blossoms are off, with a strong arsenate of lead solution, five to eight pounds to one hundred gallons of water.

In addition to this treatment, where the worms have once got a start, the *beetles* may be destroyed by spreading a sheet around and beneath the tree, and every day or so shaking or jarring them off into it, as described below.

Do not spray peaches. For the *curculio,* within a few days after the blossoms are off, take a large sheet of some cheap material to use as a catcher. For large orchards there is a contrivance of this sort, mounted on a wheelbarrow frame, but for the home orchard a couple of sheets laid upon the ground, or one with a slit from one side to the center, will answer. If four sharp-pointed stakes are fastened to the corners, and three or four stout hooks and eyes are placed to re-unite the slit after the sheet is placed about the tree, (*Continued on page 282*)

FRUIT	PEST	REMEDY	TIMES TO APPLY AND WHEN
Apple	Apple-scab	Bordeaux 5-5-50, or summer lime-sulphur spray	3.—b B O—a B F—f 14 d. (See key below.)
	Apple-maggot or Railroad worm.	Pick up and destroy all fallen fruits.....	
	Borer	Dig out or kill with wire; search for in fall and spring	
	Codlin moth	Arsenate of lead, 4 in 100; or Paris green, 1 in 100	2.—a B F—f 20 d.
		Burlap bands on trunk for traps during July	
	Cankerworm ...	Same as above	
	Tent-caterpillar..	Same as above, also wipe out or burn nests..	
	Blister-mite	Lime-sulphur wash; kerosene emulsion (dilute 5 times) or miscible oil (1 in 10 gal.)..	Late fall or early spring.
	Bud-moth	Arsenate of lead or Paris green.....	2.—When leaves appear. b B O.
Cherry	Leaf blight	Bordeaux 5-5-50	4.—b B O—a calyx closes—f 15 d—f 15 d.
	Curculio	Arsenate of lead, 8 in 100. Curculio catcher (see Plum)	1.—a B F.
	Black-knot	Cut out and burn at once (see Plum).....	3 times a week.
	Fruit-rot	Pick before fully ripe. Spread out in cool, airy room	
Peach	Borer	Dig out or kill with wire	
	Yellows	Pull out and burn trees—replant.....	
	Curculio	Do not spray. Catch on sheets (see Plum)..	
	Brown-rot.....	Summer lime-sulphur; open pruning; pick rotten fruit	3.—When fruit is half grown—f 10 d—f 10 d.
	Leaf-curl	Bordeaux 5-5-50; lime-sulphur wash.....	1.—b buds swell, fall or early spring.
Pear	Blight	Cut out diseased branches; clean out sores; disinfect with corrosive sublimate, 1 in 1000; paint over	
	Scab	Bordeaux 5-5-50, or summer sulphur (see Apple)	2.—b B O—a B O—f 14 d.
	Blister-mite		
Plum	Leaf-blight	Bordeaux or summer sulphur	1.—After fruits set.
	Fruit-rot	Same; also thin fruits so as not to touch	
	Black-knot	(see Cherry) also have neighboring trees cleaned up	
	Curculio	Jar down on sheets stretched beneath trees and destroy	a B F—cool mornings—3 times a week.
Any	San José scale..	Lime-sulphur wash, kerosene emulsion, 5 times diluted; miscible oil, 1 in 10 gals.....	Late fall or early spring.
	Oyster-shell scale	Kerosene emulsion	May or June, when whitish lice appear.

a—After. b—Before. d—Days. f—Follow up in. B—Blossoms. O—Open. F—Fall.

Remember that the efficiency of spraying must depend upon the thoroughness in applying the spray. Cover every inch!—even if you have to go over trees two or three times at each application. With proper nozzles and force, on good days, once should be sufficient

What Planting Does for a House

IN THE INEVITABLE HASTE TO SECURE IMMEDIATE EFFECTS IN YOUR PLANTING, DO NOT OVERLOOK THE PERMANENT THINGS IN FAVOR OF THE QUICKER-GROWING TEMPORAL ONES

BY GRACE TABOR

Photographs by N. R. Graves, E. S. Bates and others

WHATEVER else it may do besides, planting first of all turns a house into a home. This is surely its first great function. Who does not remember in childhood, certain houses that were extravagantly admired and others that were cordially detested? Were not the former "snugly" in the midst of flowers, with Missouri currant—oh! delectable scent of paradise and fairyland commingled — hovering near? And were the others—the hated places—not devoid of these things absolutely? Surely they were—as bare as a billiard ball of any kind of planting. Or, as the plaint went then, with small noses tip-tilted, they had "no bushes in the yard."

And how many places now have no "bushes in the yard!" More now than ever, it seems; and what a sense of impermanence, of moving-vans, such places hold. The unplanted house is eloquent of flittings—of the temporary occupant, the rent payer who reasons that he will not long abide—maybe—and therefore why sow for another to reap? Nasturtiums and sweet peas, perhaps, yes—but foxgloves and hollyhocks, peonies and bridal wreath? Never!

Leave, then, the nasturtium and the sweet pea vine for him who tarries but a summer. They serve him well and, doing this, are not to be despised; but something else will serve the "home" better. Indeed the very word has a sound of fixedness and permanence that demands permanence and dignity in all that compose it.



Vines will bring immediate results, but they are not the only essentials

The craze for immediate effects is, of course, a recognition of this demand. The feeling is instinctive that without planting that makes a decided "front" there is a vital lack. But the craze defeats the fulfillment of the craving which prompts it, because it leads to so much temporary planting, in the hope of securing the "immediate effect." We are tired of mushroom abodes, redolent of their newness; how refreshing the quiet old house, with its sweet old garden, is. "Go to," say we, "we will have one, *right away,*" and out we go to set about it. Thus in the



Hollyhocks may be sown this summer for next season's bloom, or you can set out young plants from a nursery this fall

midst of the furious speed at which things move, this desire for something solid and unchanging itself gets to rushing. We must duplicate the aged, over night.

But that is just the trouble; in the rush we do not duplicate — we only imitate—and poorly at that. The flowers of today are not the flowers of yesterdays and tomorrows, and the use of them even in the most lavish quantities, will never make them seem so. Planting must be done with permanent things and for permanence, if it is to establish a home. And every day spent on temporary work is a day lost, in that it delays the permanent.

It is a very great mistake to suppose that temporary planting is necessary, even for immediate effect. Some temporary things may be used, of course, with good results, but after one season's growth even vines of this sort are unnecessary. Right selection will establish a very excellent result within the space of two years. And this will be a result that will last and will continually improve. Neither is it necessary to buy phenomenally large or high-priced specimens in order to secure such a result.

Let me say right here, however, that stock bought from any but the highest-class nurseries is a poor investment at any price—though it by no means follows that all high-priced nurseries furnish high-class stock. Good stock from a good nursery means stock that is heavily rooted and bushy. It is never a matter of the height of a shrub, but rather always a matter of root and branch quality. And the same is true of trees.



Foxgloves for permanent planting will come from seed sown this summer

Vines are, of course, preëminent in quickly securing an effect; yet I cannot but regret the danger of ignoring shrubs which the constant emphasis laid upon vines seems likely to lead us into. Vines drape the house, to be sure, but they give it no base setting, and contribute only a portion of that whole which the spirit recognizes as atmosphere. "Bushes" and "posies" there must be too, to make the complete home.

But vines must be used of course—quantities of them—not only because they will bring the immediate results, but because they are a part of the permanent effect toward which all planting is aimed. The omission of vines cannot be made up by any other planting. They are an essential to every kind and style of house, regardless of its architecture or cost. Only—they are not the *only* essential. Let us not fail to remember that.

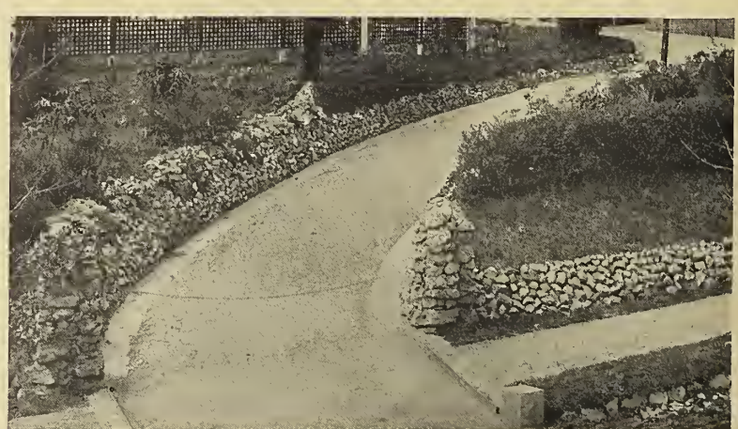


Compare the barren, cold appearance of this newly built house with the later picture of the same place a few months later

The quickest-growing of all permanent vines is *Pueraria Thunbergiana*—or perhaps the catalogue may give it as *Dolichos Japonica*. Commonly we may call it Japanese Kudzu vine, if that is easier. Strong and densely rooted clumps of this send up a growth that reaches forty or fifty feet often, in a single season. It may die to the ground in winter, though it is not so likely to after it becomes well established and an old plant. This climbs by twining, therefore it will not adhere to a surface, but must be given a trellis or something to grasp.

Boston ivy grows with a fair degree of rapidity, and will certainly never be ranked by any other wall covering. It is one of the essential vines, anywhere and everywhere. Trumpet creeper —*Bignonia radicans*—is a familiar old climber that sticks tight and travels fast and far—and is disapproved by some because it works its way under shingles sometimes. A fair degree of watchfulness will prevent this; however, there is another rapid-growing flowering vine that may be used instead if one is not willing to watch out. This is the Japanese Actinidia. Get *Actinidia arguta* for high climbing. It blossoms in June and has greenish-white flowers.

Shrubbery immediately around the base of a house is not usually advisable. It is likely to grow, in time, out of all anticipated proportions, and it makes the walls damp and chilly. There are



And notice the transformation that this rock-bordered entrance drive has undergone in the picture opposite



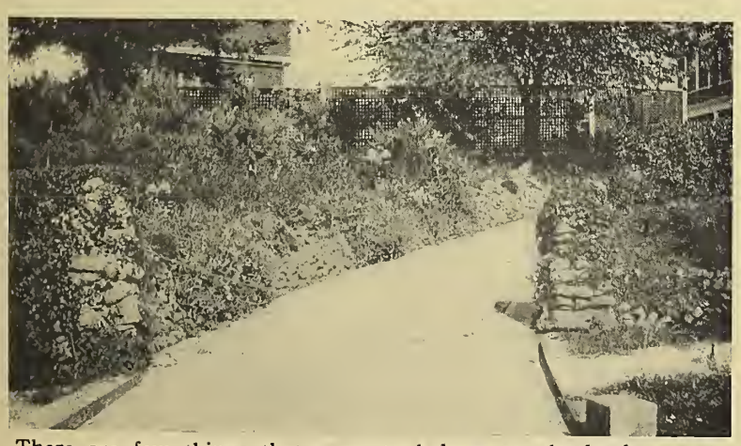
Already the vines have startled to clothe the stonework of the lower story and the dormer trellises. Aymar Embury, II, architect

a few shrubs, however, which may occupy such a position as an outside corner or the blank space of a wall where there are no windows. The deutzia is one of these, the varieties *gracilis, Lemoinei* and *corymbiflora* all being under four feet in height. These flower successfully, so that the blooming period is carried over two months. Deutzias will do well in shade, which gives them additional advantage as a plant for use near the house. The Japanese dwarf barberry (*Berberis Thunbergi*) is also suited to the same sort of location.

Flowers must be used in great quantities to be pleasing against a house; the mixed border is not effective here. And very sturdy, strong-growing flowers should be chosen, like Sweet Williams or hardy chrysanthemums. The former will blossom the second year, from seed sown in the ground where the plants are to remain, or the plants themselves may be set out in very early spring or, better still, in autumn. Spring transplanting retards and diminishes the bloom that year of any summer-blooming plant, if it does not eliminate it altogether.

Sweet Williams seed themselves, besides spreading at the ground, and some gardeners recommend preserving only the young seedlings each season, thus keeping a fine and vigorous stock on hand. Once started—and they start as easily as grass seed—there will never be a lack of this dear old flower in any garden. Indeed, it is likely to embarass with its abundance—but neighbors are usually glad of the surplus.

Chrysanthemums may be raised from seed, but the plants must be purchased for immediate results. As they blossom late in the summer, and on until snow and freezing rains actually destroy them, they will give a very satisfactory effect the first year if planted early in the spring. The transplanting does not interfere with their blooming, as summer intervenes and they have a chance to settle and grow.



There are few things that seem to belong so absolutely one to another as stone walls and vines

The false chamomile or Boltonia is effective against the house or used anywhere in masses, just as shrubbery should be used. It is indeed a very excellent substitute for shrubbery, ranging in height, in its varities, from two feet all the way to six or seven feet. This blooms in summer and autumn and will give results the first year, from early spring planting, equal to a shrubbery border in its third summer. By using it in quantity before a shrub mass and scattered through it as well, this first-year effect is obtained; then when the shrubs themselves arrive at a suitable size the plants of Boltonia may be massed elsewhere. It is of such strong and vigorous growth, however, that it is often planted with shrubbery to furnish late summer bloom. The flowers are daisy-like, in white and a lavender-pink form, and are produced by the thousand from August on. There is also a semi-double variety—*Boltonia lacvigata.*



In the rush for immediate effect do not overlook shrubs. The deutzia in three varieties will carry bloom over three months

Plume poppy (*Vocconia cordata*) is a still heavier and more shrubby-growing perennial, which may be used in the same way as the Boltonia. This has large, bold foliage and reaches a height of six or even eight feet with its blossoms, which are not in the least like poppies, but are very tiny and massed in large trusses at the ends of the tall flower stems. It grows rapidly and spreads by suckering, and one season's growth produces a sturdy plant—hence it is an admirable substitute for shrubbery while shrubbery is growing, and is permanent as well.

Clumps of the yellow day lilies, with the sweet breath of old gardens which they bring, go a long way toward establishing the new. Indeed all fragrant things seem particularly adapted to do this, and the use of them cannot be too much encouraged. Nothing is more easily grown than day lilies, and they are amiable enough to adapt themselves to all conditions of light and shade as well as practically every

(*Continued on page 288*)



Red cedars will contribute an effect of age that few things give in almost any soil

Effects That May Be Had With Shrubbery This Year

PRACTICAL SUGGESTIONS FOR THE MAN WHO WANTS TO MAKE HIS HOME GROUNDS AS ATTRACTIVE AS POSSIBLE THIS YEAR—WHAT TO PLANT AND HOW

BY ROWLAND COLLINS

Photographs by E. J. Hall, W. C. Egan and others

WHILE shrubbery plantings are intended to adorn their surroundings through all the years of their growth, all shrubs do not accomplish this the first year. With careful planning and wise selection, however, gratifying effects may be secured from the start. For immediate effect, shrubs of beautiful form and foliage are the dependables until the plantings are ready for bloom. Plants which require rigid pruning or are of scraggy habit must be excluded or concealed until growth makes them presentable.

The great peril in working for immediate effect is that of close planting. Ultimately this results in dwarfing and unsymmetrical development of some kinds of plants. With evergreens whose beauty depends upon perfection of form, contact with other specimens causes bruising of the foliage, which does not recover from such injury as does that of deciduous trees.

Plants of variegated foliage and diverse foliage forms are a great boon to the gardener who must have quick results.

The dwarf Japanese maple groups are very lovely, and since their vivid coloring is an all-season characteristic, they are immediately effective. A group of several varieties of this brilliant-hued shrub is autumnal in effect and is particularly pleasing when so placed that the eye in traveling from somber masses of evergreen is caught and held by their shades of crimson and gold.



The Japanese maples are wonderfully attractive for shrubbery massing, and of course the effect is immediate

The golden Japanese maple (*Acer Japonicum, aurem*) is deep yellow, mottled with green. It is a little more expensive than the other varieties. The *Acer polymorphum atrodissectum* has drooping branches and deeply cleft, lacy foliage. The foliage of the *A. p. lacinatum, rubrum,* is of the same color and still more delicate in shape. *A. p. scolopendifolium* is silver green, and the *A. p. versicolor* is variegated, with pink, rose and light green edged with white.

These maples are hardy, and while they enjoy fertile soil are not exacting as to location. Plants two and three feet in height may be bought for one dollar and fifty cents. They should be planted about four and one-half feet apart where soil is moderately fertile, and six feet apart in very rich localities.

Evergreens are very useful in solving the problem of immediate effect; in fact when planted near deciduous plants of unpleasing form, their bold symmetrical outlines divert attention from their unlovely neighbors. The groups given are merely suggestive of



A shrub that is valuable for foliage as well as for bloom is the purpled-leaved plum (*Prunus Pissardi*)



There are few shrubs more beautiful than our common elder. Try four-foot specimens of the golden-leaved variety

what may be accomplished with evergreens of various forms and contrasting color.

Group Number One is a triangular planting using the American arbor vitae near the center of the triangle slightly toward the apex, two specimens of the blue juniper (*Juniperus stricta*) each, midway between the lower angle and the arbor vitae, two of the dwarf golden arbor vitae, Geo. Peabody (*Thuya occidentalis, aurea*), each, at a lower angle of the plan, and one specimen of the dwarf bushy pine (*pinus mughus*) at the apex. If possible, procure specimens from two and one-half to three feet high and plant them four feet apart.

Group Number Two is an elliptical one, useful at a carriage turn. It employs Koster's Colorado blue spruce near the center, with the Douglas golden juniper of low-spreading habit at one side, and the golden weeping retinospora (*R. filifera aurea*), of low wide habit, at the other side, and four specimens of the dwarf arbor vitae (*Thuya occidentalis nana*) at equal distances around the outer edge of the ellipse. The Colorado blue spruce should be six feet from the nearest specimens.

Group Number Three is intended to form intermediate masses between tall trees and lawn. It consists of the golden-leaved retinospera (*R. pisifera aurea*), eventually tall and spreading, two of the Norway spruce, three of the American arbor vitae, and, in the foreground, a Siberian arbor vitae (*Thuya occidentalis Siberican*) conical in form, dark in foliage and of slow growth, and two or three of the Tom Thumb arborvitaes (*T. occidentalis Ellwangerana*), of broad compact form and light green foliage.

Group Number Four comprises Nordmann's silver fir, two specimens of hemlock spruce, one of the variegated arbor vitae (*T. O. vervæneana*), green and light yellow, and two of the Sabin juniper (*Juniperus Sabina*), rich dark green. The spruce and silver fir should be seven feet apart at least, and the lower-growing specimens from four and one-half to five feet apart.

The arbor vitaes, dwarf pine, the low growing junipers and box, are very useful for plantings near the foundations of dwellings, in nearly any kind of soil.



A shrubbery group of junipers, barberries, holly, yuccas, hypericums and other elements, well massed



The hydrangea may be kept low to induce larger blooms or it may be allowed to assume a tree-like form

Evergreens that are to be planted in April should be put in the ground as early in the month as possible. They should be moved with a large clump of earth held in place by sacking.

When aiming for immediate effect with deciduous shrubs the hardy hydrangea should be included. Stocky, well rooted plants will bloom this year in July and continue through the summer.

The weigelia is also valuable for early effect. The late-blooming varieties, *Weigelia candida* and Eva Rathke should bloom this year. The variegated weigelia bears pink flowers in June, but if bloom is not secured the first year, it is valuable for the beauty of its foliage alone. Being rather dwarf, it should be well to the front of shrubbery masses.

The dwarf azalea and the Chinese privet are ornamental for their foliage. The azalea is evergreen. When established these plants are June bloomers.

The *Azalea Mollis* will bloom this year if the plants are strong. It is of dense habit and blooms in May. If there is a moist shady place be sure and plant this azalea there.

The late August-flowering *Hypericum Van Fleeti,* or golden lace, will flower this year, bearing masses of yellow blossoms until frost.

Two other shrubs valuable for foliage characteristics and ultimately for bloom are the golden-leaved elder (*Sambucus nigra, aurea*) and the purple-leaved plum (*Prunus Pissardi*). Get specimens from three to four feet in height and plant them in the center or toward the back of the group.

Good-sized plants of the Chinese Matrimony Vine (*Lycium Sinensis*) thrive easily in any spot, and because of their graceful drooping form make pleasing contrast with other shrubs. Where vines are necessary to produce a harmonious effect or for screening, the rambler roses and the Wichuriana or memorial rose can be depended upon for rapid growth, throwing out shoots fifteen or sixteen feet long. The plants to be set should be at least three years old to insure the strongest growth.

In setting the plants be sure that the roots have not become dry and shriveled. It is better to set moist roots into a rather dry

(*Continued on page 292*)



Evergreens make an immediate showing in your planting scheme. Move them with a good ball of earth bound to the roots

Annuals That Should Be Better Known

AMONG THE FLOWERS THAT BLOOM THIS YEAR FROM SEED SOWN NOW OR NEXT MONTH THERE ARE MANY DESERVING SORTS THAT ARE TOO FREQUENTLY OVERLOOKED

BY H. S. ADAMS

Photographs by Nathan R. Graves



The helichrysum is the best of the old-fashioned everlastings

DID you ever peer through a garden gate and wish that you might go inside? If you have, you can imagine the feelings of certain flowers. They want to go into your garden, but—you haven't asked them. At this moment they are looking wistfully from the pages of some catalogue or other and hoping that another spring will not pass without the longed-for invitation to come into your garden. Won't you consider at least one of these unbidden guests this year and offer it a welcome? In beauty it will give you out of the abundance of its heart, and all it will ask will be decent bed and board.

I have in mind, especially, certain of the annuals. Everyone grows annuals as a matter of course; for no matter upon what plan of permanence the garden be builded, there always is needed a quantity of these flowers of a single summer's life, to fill in the chinks and add to the glory of color. But the average gardener is prone to forget that the common annuals are not such because they are the best; the only reason why the list is not longer is because some of the others have been so grossly neglected that they are not generally known.

How many, for example, have ever tasted the joys of salpiglossis? I can name two communities in which mine were the only ones to be seen. Yet here is one of the most beautiful of all annuals. Moreover, it offers a unique and singularly fascinating study on account of the marvelous colors and markings of the blossoms. It has the common name of painted tongue, which, as compared with the botanical name, is merely going from bad to worse. However, that does not alter the beauty of the blossoms—something like a petunia in form, but a little smaller. There are half a dozen kinds worth growing—rose, scarlet, purple and white, each with veins of gold, and also primrose and crimson. As forty cents will cover the cost of the entire collection it is more satisfactory to plant them all, each variety making a better display by itself. It is an admirable flower for cutting; so any surplus plants may be placed in rows on the edge of the vegetable garden or in some out-of-the-way place. The kinds mentioned are all the improved type, but there is an Emperor strain of mixed seed that makes a still finer showing for specimen plants. The salpiglossis has no cultural difficulties; the one thing to bear in mind is that the seed should be sown early under glass—a sunny window will do for any annual if there is neither greenhouse nor coldframe—in order that the bloom may set in while the summer is young; it will continue until frost.



The larger centaureas here are sweet sultans, an annual too little seen nowadays



The almost-forgotten globe amaranth is worth taking up again

Then there is the everlasting. Only the other day some one asked me if I knew it. Dear me, it was in many an old garden when I was a lad. It was highly prized in those days—in winter as well as summer, for it was plucked from the garden to adorn the parlor mantel when there were no flowers outside other than the snow flowers. I hope that it is banished forever from the parlor mantel, but I do miss it in the gardens that I wander through. What we always called the everlasting in New England is the helichrysum, though actually this is only one of several kinds of immortelles. It is the best of them all for the garden as it is the most decorative. The globular straw flowers range from white through yellow to a deep red, and are borne high above good foliage. For color it is wisest to plant the varieties separately; ten kinds are offered for fifty cents in one of the imported collections. A rich soil is best and the seed must be sown early under glass to insure the full period of bloom. Another good everlasting, plentiful enough in graveyard wreaths in winter but little known in the garden, is the xeranthemum. It grows about three feet high, and the double blossoms—rose, purple or white—have an outer row of elongated rays. A third everlasting, the gomphrena, always has been called bachelor's button in our part of the country, but fortunately may be designated by the less confusing name of globe amaranth. Beware of the "red" variety; it is a rich solferino that will fight with anything save white. Of the old kinds the white is the safer. The new *nana compacta* type of either is excellent for edgings, as it grows only a foot high; the other runs above two feet. The yellow variety, *aurea superba,* is also a useful annual. If it seems desirable to add to the home aggregation of dust-gatherers, these everlastings must be picked before the blossoms are fully ex-



Salpiglossis, or "painted tongue," is attractive particularly on account of its veining

panded and dried by hanging, heads down, on a line of string.

One of the most precious of the newer annuals that is making woefully slow progress is the African daisy (*Arctotis grandis*). There cannot be too many stars in the garden, and this flower supplies some that are novel as well as beautiful. The blossoms, which rise on long-branched stems from a clump of handsome, silvery foliage, are white with a centre of soft blue, which shade reappears on the underside of the petals. This is a true "day's eye," the blossoms closing at night and in cloudy or rainy weather. It is a profuse bloomer all summer long, surviving even the early frosts, and is fine for cutting, as it lasts a long time in water. Give it a sunny spot. The seed may be sown in the open ground, but I find it is far preferable to use a coldframe. There is also a rich orange African daisy waiting expectantly. This is *Dimorphotheca aurantica*, which is a very showy low bedding plant.

One of my delightful flower memories of Paris in early summer is a small pansy that was used in prodigal quantities to edge borders and walks with a solid color. For years this tufted pansy, for such it was, has been a prime favorite in Europe, but over here the general run of flower-lovers appears to think that the only pansy is the one that spends its beauty as a rule before the hot weather comes. Here is a deplorable omission from the home garden. While the blossoms are smaller, the tufted pansy is superior to the common type for color effect, as the plants, if well cared for, are a compact mass of bloom. Furthermore, they are invaluable for a pansy succession, since they are at their best after the others begin to peter out, and they bloom through the entire summer. There are admirable yellow, lilac, purple and white varieties. Any one of them is better than a mixture, for garden color notes, but an expenditure of forty cents for all four will be money well laid out. For June bloom sow the seed in April under glass. Usually this flower is called the viola, but that is a wretched name; all of the pansy and violet tribe are violas.



There is no daintier garden annual than schizanthus with its orchid-like flowers



The old-time "mourning bride," or scabiosa, is one of the best annuals for cutting

Lately the old-fashioned sweet sultan (*Centaurea imperialis*) has had a place among the elect in the windows of the Fifth Avenue flower-shops in New York. But who knows it in the garden? Not many. Nevertheless it is among the very choicest of annuals, and so easy to grow that it is only essential to remember that the plant has a marked peculiarity; it so dislikes the "dog days" that the seed must be sown early—say April, under glass—in order to secure perfect bloom before the weather gets too hot. You may have it in purple, rose, lilac, lavender or pure white; and again, any one of these varieties is better than a mixture. The handsome yellow sweet sultan, also known as Grecian cornflower, is *Centaurea suaveolens*. It is very fragrant and, like the other kinds, is excellent for cutting. Another *Centaurea* that should be better known is the basket flower (*C. Americana*). This is a glorified "ragged sailor," three feet high, but the blossoms, which are sometimes four inches across, are more like the thistle in form. It is extremely effective as a cut flower.

The schizanthus, or butterfly flower, is another annual that has been knocking in vain at most garden gates. And it is so dainty—myriads of orchids crowning a mass of finely cut foliage, one might say of a bed of it. The large-flowered, dwarf variety, which has a wide range of delicate

(*Continued on page 292*)



This little-known daisy from South America is low of growth and has flowers of the richest orange. Fine for bedding



Inside the House

Timely Suggestions and Answers to Correspondents



The Editor will gladly answer queries pertaining to individual problems of interior decoration and furnishing. When an immediate reply is desired, please enclose a self-addressed stamped envelope.

A Wood and Willow Screen

A FOLDING screen of unusual beauty has recently been made by the designer of a style of furniture that is recognized as being decidedly out of the ordinary. The screen is about six feet in height and has three sections, but instead of having a solid covering of leather or some heavy material, they are filled in with willow, woven in such a large mesh that a most delicate openwork effect is produced.

Each section of the screen has three willow panels of graduated size, the largest at the bottom. The frame is made of ash, a wood with a beautiful grain that takes stain readily, and that may be done in silver gray, brown, green, or any color that is desired. The screen has the rather unusual advantage of fitting in well with furniture of practically every description, without appearing too heavy for a summer room or too light for the more solid-looking furnishings of a winter apartment. Done in a silver gray with the willow left the natural color, it serves the purpose for which it is designed and at the same time gives an impression of lightness and grace that is most satisfactory. If intended as a more substantial piece of furniture it may be done in some dark color to match the fiittings of the room, the willow stained as well as the wood, and a lining of thin silk put in to give it more body, and to make it quite opaque.

Hints on the Care of Wood Floors

THERE is no reason for distress over the care of wood floors, if they are properly "finished" when laid. A natural wood floor is easily kept in perfect order, when common sense is used and the following hints observed:

Frequently wipe the floor with a dampened, *not* a wet cloth, and do not use hot water.

Never touch the floor with a scrubbing brush, nor with a broom.

Never use a washing powder of any kind, or a cleanser. If it is so soiled that it needs more than cool water, use a little castile soap, and wipe it dry with a chamois.

To remove any waxy substance that castile soap will not dissolve, use a woolen cloth dampened with kerosene, and rub off quickly.

Never touch any floor, or other varnished object, with kerosene, except in an emergency as above described.

Bathroom Suggestions

IF your bathtub is not provided with a "safety rail," it is a good plan to place a strong metal or wooden towel rod on the wall, from twelve to eighteen inches



An uncommon but attractive screen of ash and willow lattice work. It readily adapts itself to any color treatment

above the rim of the bath. See that the screws penetrate the wood behind the plaster. The soapy slipperiness of the tub has been responsible for many accidents in the past; the guard rail will give a safe hold, and prevent falls.

If economy is necessary in planning the bathroom floor, have it of hardwood oak, Georgia pine, maple or birch—the cracks carefully filled in, and the whole stained, waxed or oiled. A wooden floor that is not as waterproof as it is possible to make it, is a poor investment, for it is impossible to keep it from being wet or splashed.

A window of leaded translucent glass is more sanitary than curtains. The glass will cost from 75 cents to $3.50 per square foot, depending upon the design and the locality. Send the window-sash to a trustworthy manufacturer, with your idea for color scheme and design, and the price per foot you wish to pay. Let him send you sketches for your approval or criticism. The sash can then be returned to you with the glass neatly fitted in, ready to set in the window-frame.

House Plant Fertilizer

MANY housewives thoughtlessly throw away the bones that accumulate in the kitchen when these are just what is needed for the health of their plants. Burn the bones in the "second hole" of the range, and when quite white pound them to a fine powder. Mix a teaspoonful or so (according to size of pot) in the soil around the plants, and watch results. This powder contains potash salts, which furnish an excellent fertilizer for the plants.

A Handy Bungalow Kitchen

A PROBLEM of the small kitchen is to provide a generous table space. One of the features of a carefully planned bungalow is a table two by six feet, closed in below for use as a cupboard. The height, thirty-two inches, was a point that had to be impressed on the builder's mind. The top is made of North Carolina pine, the same kind that was used in the flooring. Two doors open into the roomy closet beneath, which contains many bulky articles that are too clumsy to go into the regular kitchen closet, besides cooking and laundry utensils that would have been hard to dispose of without this generous storage space. Hooks are fixed to the sides, as well as to the under part of the table top, so that the closet can be used for numerous small articles as well. The top is protected with one large piece of thick linoleum. Above this the ample space allows for various shelves for things

that are to be kept within reach. A high shelf, six inches wide, is filled with preserve jars containing dry provisions, such as cereals, tea, coffee and dried vegetables. Below a wider shelf holds the cannisters containing flour and sugar. A home-made set of shelves occupies the end of the table; this is for dishes frequently used. The neat appearance of the table is assured by means of the little curtain attached to the lower shelf. This can be drawn aside when the entire space is needed, or can be closed to screen dishes that are waiting to be washed, bottles or other odds and ends that must be temporarily set aside till a more convenient time for cleaning.

Next to the table is a convenient closet, measuring two by three feet and running from floor to ceiling. A unique feature is the double door. The lower closet, six feet in height, is built for the ordinary kitchen utensils that are not to be kept exposed to view. The upper part, with a separate door, is built for utensils that are seldom wanted, this arrangement protecting them from exposure to dust by the constant opening and shutting of the door.

Closet and table cupboard, together, occupying as they do the north side of the room, form an air cushion to keep out the cold, the house being simply a shingled bungalow with no cellar under this part.

The remainder of the north wall is occupied by the door, leading to the porch and the refrigerator closet. The east wall accommodates the door into the cellar, a high chest of drawers, containing many necessary odds and ends, such as hardware and small gardening articles. Next to this are the openings into the dining-room built-in sideboard. In addition to the usual door for the passing of food and dishes to the sideboard shelf, is another door, measuring twenty by twenty-five inches, just below, providing a most convenient method of reaching the contents of the lower part of the sideboard, which has, also, the usual low doors on the dining-room side.

Following next, the first thing on the south side of the kitchen, is the door that opens into the other part of the house. The adjoining room being somewhat dark, light was admitted by a novel method. The door is of the type that contains five horizontal panels. The three upper panels were removed and replaced by glass, at a cost of about two dollars. These glass panels, with a thin curtain, add very much to the attractiveness, from both sides of the door. A point was made of hanging the door on the side that made it a screen for the kitchen, instead of exposing all kitchen operations to anyone in the next room, every time the door was opened. This point was found to be worthy of notice in other parts of the bungalow, in spite of established custom, from the builder's point of view, as to the side for the hinges and the swing of the doors.

A high warming closet for the range cost an additional twelve dollars, but was well worth it in drying utensils and warming food.

A space to the right of the range was reserved for fuel, next to this are the porcelain wash tub and the enameled iron sink, with no woodwork near either to become unsanitary. Above these runs another six-inch shelf, with more glass jars of provisions; underneath are hooks to hang small utensils, hidden from view and protected from dust by a wide piece of bordered shelf oil cloth. A large window on the west, completes the circuit of this eight by thirteen kitchen. A passage about four feet wide runs through the center of the room, so that it is not necessary to take more than a few steps to reach any article wanted. A larger or differently shaped room would cause more waste of energy.



The kitchen table is placed in one corner and made a fixture by building cupboards in the waste space beneath it

The House Telephone

THE intercommunicating telephone is proving quite a factor today in household economics, and rapidly doing away with the necessity of call buttons and speaking tubes. In business houses and hotels, we have long been familiar with the system which put us in personal touch with different sections of the building; but many of us have not thought of the possibility of utilizing this very sensible plan right in our own houses.

With the old-time speaking tube, which is still a feature in many houses, there is always dissatisfaction, and the tube connection is with only one place—usually the kitchen; and most often out of commission. With the call button, while it serves the purpose of summoning help, it wastes much time and energy on the part of the servants who must travel up and down stairs at every call, whether service is required or only an order to be given.

An intercommunicating telephone established in a home puts every important room in connection with the other, if desired, and also connects the garage or stable with the house—an important item thoroughly realized by those who enjoy it.

In a house where only one maid is employed, or where there is none, a telephone communication between the front and back door and the upstairs hall (where the matron of the house is) will save many fruitless journeys up and down when she is alone. Another convenience of an intercommunicating telephone is its use as a fire-alarm, which may be quickly rung in every connected room, without loss of valuable time. A station in the hall near the maid's room is a necessity when one maid is kept, so she may be called at any moment.

An interior house system is in continual use; and instruments are apt to be installed in places where they are subject to sudden changes of temperature; therefore it is advisable in installing to select a high grade system—not necessarily the most expensive, but the best. There are several good systems which are inexpensive, and when once installed they work satisfactorily without the necessity of constant repair. A service to connect two rooms may be installed as readily as one which connects a dozen. The cheaper method is to have all instruments connected with the same circuit; but this is not quite as satisfactory as being able to call without a signal code.

The cost of installing an intercommunicating system varies from $6.00 to $20.00 per station, depending upon the size of the installation, and the quality of equipment selected. The fixtures may be secured to match the finish of other fixtures in the room. Two rooms only may be connected or two dozen.

The cost of maintenance of the automatic telephone is practically nothing, if good instruments are installed.



The two doors between, the stove and chest of drawers, give access to the built-in sideboard in the dining-room



Garden Suggestions and Queries



The Editor will be glad to answer subscribers' queries pertaining to individual problems connected with the garden and grounds. When a direct personal reply is desired please enclose a self-addressed stamped envelope.

The Garden Month

"April showers
Bring May Flowers,"

but April hours, spent in the garden bring May lettuce and June peas and other good things for the table.

We are, indeed, confronted by a wilderness of things which all seem to demand immediate attention. It is hard to know what to do first. Sometimes an hour's thought will accomplish as much as a week's work; and that is a good principle to keep in mind just at this season of the year. If your planting plan has been made out, as it should have been many weeks ago, you have already the right start. At least you know definitely what you are going to set out to do. The next step in increasing the results of your labor is to apply it systematically—make a list of the many things you have to do, in the order in which they should be done. This may seem a very unimportant matter, and very likely you will think that you can carry it all in your head just as well. Take my word for it that you can't. It will require but a few moments to make out such a list, and it will at least assure your getting everything done, and getting each thing in order. Isn't that worth the trouble? As a matter of fact, however, it will save trouble. Keep this list in use, and put down every garden matter that will need attention as you go along; and check off the ones attended to, with the dates. If this list is kept for use another year, it will prove invaluable as a guide to next season's operations. The dates especially are of value in this record. For instance, if you got your lima beans in too early and had them frozen, you will have a guide to refer to. As a suggestion to beginners the following list is given:

Clean up all litter in garden for compost heap — March 10.

Engage man to plow—March 16th.

Have manure delivered.

Get two bags fertilizer and 50 pounds nitrate of soda—March 20th.

Put soda on rhubarb and asparagus, and loosen up soil—March 28th.

Set lettuce plants outside frames.

Set out early cabbage and cauliflower—April 1st.

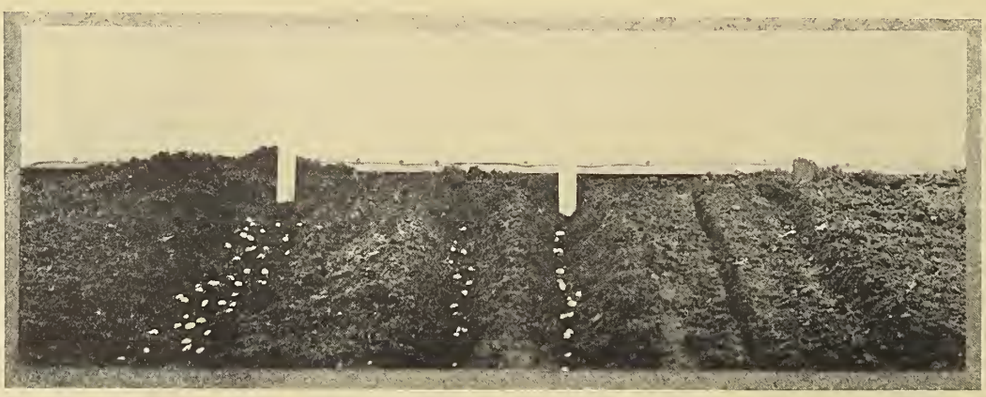
Note: Heavy frost on 3rd. Cabbage not injured, but cauliflower lost. Sow onions (make seed-bed especially fine).

Transplant tomatoes.



Sow small seeds from the packet, shaking them directly into the drill when there is no wind. Cover at once

And so on, with the dozens of other things you will find to think of and do. All this, of course, may seem dry enough, when you are impatient to get into the garden itself, but it will pay.



Four types of drills: 1—Broad furrow 2 in. deep. 2—Double furrow or one row, 3 in. deep. 3—Half in. drill for small seeds. 4—Inch drill for medium seeds

About Sowing Seeds

You must not be so impatient that you do the work in a hurry and fail to do it properly. Gardening is not all easy work, even if it is all play. The sowing of seeds, if you have no seed drill, is one of the most tedious jobs, but also one of the most important. It will require care and patience. In the first place, be sure to have your seed bed in the very finest condition you can possibly get it. Read the suggestions on page 244 of this issue of how to put it in shape. Then, when you are ready to plant, take with you to the garden a good stout line, a hoe, an "onion" hoe or other very small one, and an iron rake. If the ground is not fresh, rake the strip you are going to plant over again and then stretch your line for the first row. Set it straight, even if you have to move it at one end or the other several times. Remember you are marking off for the whole garden. Of course, the depth of the drill will depend upon the sort of vegetable to be planted. For lettuce, radish, turnip and seeds of similar size it should not be more than one-half of an inch deep. If you haven't a very small hoe for making such drills use a sharpened stick, rather flat, so as to leave a clean V-shaped drill; the earth will fall back if a pointed stick is used. Then tear off a small corner of your packet of seed and scatter thinly and evenly in the little drill. The number of seeds to be put in a given length of drill will vary with the vegetables planted, but as a rule for seeds of this size there should be several to every inch of row.

And now we come to the most important trick of successful seed-sowing: *Firm the seed into the soil.* Unless the ground is very moist, as it sometimes is early in the spring or late in the fall, this

should always be the rule. After the seeds are scattered in the row, with the ball of the foot or with the narrow-bladed hoe mentioned above, press lightly but firmly down upon every inch of drill. Don't push the little seeds too deep, but don't be alarmed if they are for the most part out of sight when the operation is finished; they will come back into sight much more surely and quickly than if left lying loose in a hot and dry soil. This "firming," remember, is done before the seeds are covered in the drill. Many of them will be covered by this process, but after it fill in level with the surface soil, either by drawing the hoe along the edge of the drill, with the blade at an angle of forty-five degrees to it, or by raking lightly across the rows with the back of the iron rake. Parsnips, salsify, etc., should go in about one-half inch.

So much for the smaller seeds. Peas and beans and corn require different treatment. They should go in from one to three inches deep, and if in single-row drills, these should be from six inches to a foot wide; but it is usually almost as quick, and more satisfactory, to sow in double rows, with the twin drills from six inches to a foot apart. This usually gives a more even stand, and it is much easier to keep the weeds in the row cleaned out. Bush beans should be put in about two inches apart in the drill, and peas scattered, especially for the first sowing, so that there will be at least a score to every six inches of a double drill. If the soil is at all dry, don't forget to firm!

Beginning to Fight the Weeds

IF April "opens up" well, you will have many seeds breaking ground by the first part of May—and among them the intruders, weeds. They seem to come out of the sky with the spring rains. Don't let them get a start. As soon as your seeds are planted, if you can see the rows, start the wheel hoe, with the "rake" attachments, or, if you haven't a wheel hoe, the iron rake between the rows. Don't wait for the weeds to appear—you'll have trouble enough in the rows, where you can't get at them now. A few radish or turnip seed, which germinate in a few days, scattered along the drills of lettuce, and parsnip, and onions, will mark the rows quickly, and so be of assistance. Get an ounce extra to use for this purpose. Remember that you can destroy more weeds now in ten minutes with the iron rake than you can a few weeks later in five hours with a hoe. For further suggestions about modern methods of fighting weeds, read the article on modern garden tools on another page.

In the Vegetable Garden

IF they have not already been attended to get your poles for beans and brush for peas ready. Lay the pea brush out in a flat pile, and put some boards and heavy stones on it so as to flatten it out, and thus leave more room in the rows for cultivating and picking. Now sow first plantings of beet, carrot, leek, onion, parsley, parsnip, salsify, kohlrabi, lettuce, peas, radish, spinach, turnip, cabbage for plants to be set out later, also brussels sprouts, cauliflower and celery. Set out started plants of asparagus, rhubarb, beets, cabbage, cauliflower, lettuce and onions. Be sure all these are well "hardened off" before going into the open ground. If you have not raised your own plants, buy them early enough to keep out-of-doors a few days and nights before setting out.

In the Flower Garden

MOST of the seeds and plants for the flower garden will produce as quick and more certain results if not put in before next month. There are some exceptions; first of all, sweet peas, which should go in right away, if not already planted, in a good, deep, well-drained, well-manured trench. Tramp the manure in well, cover with two inches of fine soil, plant the seed and cover with two inches more, leaving a depression of two to four inches to be filled in later, but be sure to put it where water will not collect and flood it. Don't sow too thickly—not as thick as garden peas. Cornflowers, hardy pinks and primroses are other seeds that may go in now. But don't neglect the preparation of the soil just because the seeds can wait. Have plowed or dug under, a good dressing of rotted manure, and let the plot lie in ridges until you need it next month. Let it stay rough, and smooth it off as you need it. Make a plan of the flower garden and get a dozen or so packets of annuals to sow later. You can get wonderful results from a dollar or two in seeds.

In Greenhouses and Frames

DON'T let your outdoor work take all your attention from the things under glass. See that everything in the frames is given room and air—if neglected they will "run up" in no time to spindling and insect-covered plants, next to worthless.

Don't waste your empty frame space. Get the cabbage and lettuce plants out of them as soon as possible—before you're ready to set them out and then if there is any room not demanded by peppers, eggplant and tomatoes, start melons, corn, and cucumbers at once, planning to leave a few plants of the latter permanently in each frame. The cucumbers and corn may be started on sod, or in boxes or pots, as suggested in the gardening article on another page.

The Value of Cosmos

FEW of the ordinary bedding annuals mingle well with larger growing species. Others may be beautiful in themselves or fine *en masse,* but of little value in the mixed border. The feathery cosmos, however, is the exception. Of all the flowers that bloom, it has no rival in giving the softening touch to all that grows beside it.

The tropical *ricinus* loses none of its dignity if the delicately-cut foliage and dainty white pink or crimson flowers play hide-and-seek amid its giant leaves. Indeed finer combination of plants for a mixed border would be hard to find. Also cut-and-come-again sunflowers with cosmos to fill the irregular spaces between the taller sunflowers, field-corn and *ricinus* is an effective and useful combination, as the individual habit of growth of each is such that they virtually support each other.

If cosmos predominates it gives an artistic cloudlike effect above white asters placed in the foreground. The color scheme is fine if kept in yellow and white only; but it is a matter of taste whether the warming touch of pink or crimson cosmos be given, or simply the white in profusion for the landscape effect. Cosmos is beautiful as a specimen plant but a combination is more satisfactory.



Cosmos is of value in the mixed border. It fills up irregular spaces and harmonizes with a variety of colors

Ingenious Devices

LABOR-SAVING SCHEMES AND SHORT CUTS IN THE HOUSE AND IN THE GARDEN

Celery in Tiles

AN ingenious celery grower has resorted to the following clever method of cultivation. He plants his seed in double rows in a trench according to the usual practice and when the plants have become 8 in. in height he makes use of the tiles. These are the common terra cotta, vitrified or glazed pipe tiling so frequently seen in general use. Select for the celery covers, pipe preferably of four inches in diameter. This can be easily broken into cylinders of convenient length. If the collar joints of wider diameter are left on, they should be put into the earth so that they are at the bottom. The tile is placed over the celery and the outside entirely banked with earth. A hole is left running down through the dirt outside the tile. The plants should be watered through this so that the water will reach the roots directly. If it is poured inside the tile it will cause the celery to discolor and rot. This precaution, as well as that of banking the earth about the cylinder to prevent its becoming overheated from the sun, are the only essentials for success when using this method. Its benefits are apparent, in that it enables one to grow long, clean stalks of celery which are blanched quite white for their whole length. Another advantage is that the concrete acts a little like a coldframe and helps to produce ripened celery earlier than the old way. H. P.

A Gardener's Use for Old Tin Cans

THE two- and three-pound cans that are thrown away as soon as the contents are removed, may be made to serve the gardener in a profitable way. Melt both ends and along the side seam; they will then have to be held in shape by tying a string around each one. Push them down in the hotbed so that the upper rim is an inch above the surface, then plant the seed of melon and cucumber in them. The seed will germinate and grow in the hotbed, and when the weather permits the cans may be taken up with the dirt that is in them and also the plants that have grown therein, and set in hills previously prepared for them. The string is cut, and the relaxing can is lifted out, leaving the plant undisturbed by the process of transplanting. Melon plants cannot be moved without sufficient dirt adhering to the roots to prevent the breaking of any of them, and this plan gets around that difficulty. When no longer needed the cans may be rolled one within the other and stored away for another year. They are also valuable to place around plants which are susceptible to the ravages of the cutworm, by pushing them an inch into the soil. H. F. G.

Utilizing the Space Above the Radiator

AT last the unsightly and much-in-the-way radiator serves another purpose than that of diffusing heat. How often have we longed to put it somewhere out of the way, and utilize its space for a bookshelf or other piece of furniture. Now there comes a shelf supported on brackets which may be firmly attached to the radiator, and made to hold heavy weights. The brackets are made in different weights and styles, to correspond with the various designs in radiators. The platform which rests on the brackets, is at a sufficient distance above the radiator to be free from heat, and any number of shelves may be installed above.



When the celery is covered with the pipe, bank the soil well up about it, leaving but a few inches above ground

Glue Oilcloth on Kitchen Tables

INSTEAD of tacking the oilcloth cover on the table or cabinet top glue it firmly. This, together with an application of good varnish two or three times a year will insure doubled or trebled service from ordinary table oilcloth M. E. S. H.

For Creaking Doors

THE bathroom door had developed a persistent and annoying creak. I literally drenched the hinges with oil in an effort to stop it, but still it complained distressingly. An investigation revealed a chafed spot on top of the door. This was rubbed with soap, literally lathered on. The creak then stopped as if by magic. M. E. S. H.

For the Casement Window

THE casement window is apt to prove a great nuisance unless one provides for its adjustment in a simple and effective manner, which will lock it securely at any desired point without removing the wire screen. There are several such devices on the market, and the best of them work easily from the inside, either under the sill or through the screen. No one plans casement windows to swing inward nowadays, for they interfere much with hangings and shades, as well as occupying too much space when open.

One adjuster is a simple mechanical device, which is hidden by the inside sill or stool of the window, assuring a firm clutch on the window; and when closed or open the device acts as a lock. The only part visible in the room is the operating handle, which folds back under the projecting sill when not in use. Jointed rods alone are visible from the outside.

The adjuster which works through the wooden frame of the screen or storm sash has only a small lever and wheel visible from the inside, and is simplicity itself to operate, with nothing to get out of order.

The simple features of the new-fashioned casement adjusters make it possible, even for a child, to open and close the windows, without interference with wire netting or storm sash, and they do away with the annoyance of rattling, when closed and open. K. N. B.

Supporting Tomato Vines

A SPLENDID support for tomato vines will be found in the common fruit crates. Some of the long slats should be taken from the sides and the crate placed on end over the plant when quite young. Then, as it grows it adjusts its leaves and branches to fit the frame, supporting itself without any tying. Windstorms and beating rains can do it little damage, and the plant will do so much better when thus guarded that the small amount of expense and trouble will be well worth while. L. McC.

A Lasting Stove Polish

WHEN the polish has been burned off the stove it is very often difficult to replace the black polishing surface, and when the ordinary liquid or soft polish is used there is small probability of succeeding. The blacking can be put on, but when rubbed to a polish it quickly disappears, leaving the stove as red and unsightly as before. To succeed with this work take a piece of blacking that has hardened in the box, and after wetting the spots to be treated, rub on the polish with vigor, and after a time enough will adhere to permit of a shine of great brilliancy. A. D.

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Paper Crop Profits

By George Ethelbert Walsh

THE country boys have always been depicted as yearning for city life, and unquestionably the trend of our population has been townward, but offsetting this in recent years has been the growing desire among city-born boys to get back to the country. The dream of running a Western ranch or owning a farm is strong today in the minds of thousands of boys who are tired of the restrictions of city life. Moreover, a good many city dwellers are wearied of the "strenuous life," and when they can lay aside sufficient money they purchase a country home for pleasure and profit.

Anything which will induce city boys and men anxious for country life to locate on farms and gardens in a proper way should be encouraged, but the conditions should be fairly and squarely understood and faced. The notion that farming is "dead easy" according to modern scientific methods has deceived many. "Paper profits" is largely responsible for this. It is easy to figure out on paper unusual profits from the most common crops, and then to multiply them by ten, twenty or a hundred to show that any man can become wealthy in a short time. The full capacity of our soil has never yet been definitely measured. Science has sought to show that under intensive culture and the most favorable conditions present-day crops can be doubled and trebled. Experimental farms of small size have demonstrated that the yield of each acre of land under the most ideal conditions could surpass anything anticipated today. But we have not yet reached the stage of development where we can take the ideal experiment farm of a few square yards as a standard for field culture on a ten or twenty acre farm. Those who figure on "paper profits," however, frequently make this fundamental error, and then in their disappointment condemn the whole system of modern scientific farming.

For instance, at one of the agricultural experiment stations a small test garden was planted with Gibraltar onions, a new and most excellent variety. They were planted three to every eleven inches in the row, with rows fourteen inches apart. That would make about 12,000 plants to the acre, and from the high yield obtained on this small test garden upward of 2,000 bushels should be harvested from an acre if the high average held. These onions sold at the rate of $2 per bushel, which would give $4,000 gross receipts from an acre of ordinary onion land. Had the new Welsh onions, which sell as high as $3 and $4 per bushel, been planted instead of the Gibraltar, the returns would have been between six and eight thousand dollars per acre.

What a good many may fail to notice in this crop report is that the season, soil, and culture were all ideal, and that it

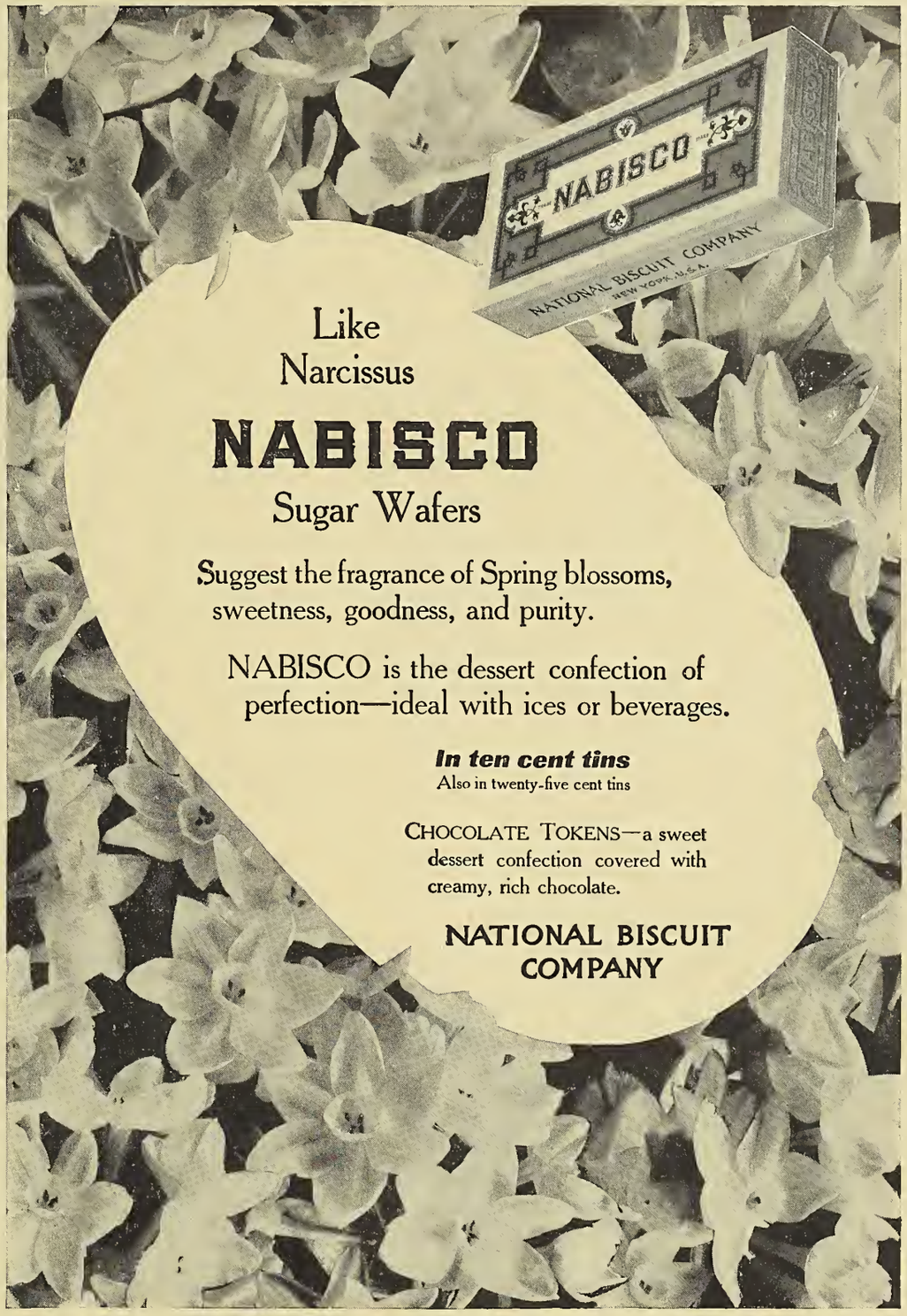
would hardly be possible to secure similar results on an acre of land, nor could two seasons be depended upon to yield the same results. Moreover, prices fluctuate so that $2 to $4 per bushel for onions would represent only the unusual years. Nevertheless, such paper profits can be figured out without stretching the truth, but like all paper profits they would prove very misleading in actual practice.

In our Northern States several thousand quarts of strawberries are raised on an acre of good land, but around Norfolk, Virginia, it is not unusual to raise from five to eight thousand quarts to each acre. In some parts of the South ten thousand quarts have been raised, which if sold at 10 cents a quart would return a thousand dollars an acre, or at 20 cents two thousand. Taking the latter as a standard, it is easy to figure out $40,000 gross receipts on a 20-acre strawberry farm. If only one-fourth of the returns represented net profits a strawberry farmer would prove a pretty good commercial success.

But similar remarkable paper crop profits can be worked out nearer our own homes. Potatoes offer a pleasant solution to the question of how to "get rich quick" in farming. Ten years ago the average yield of potatoes was about 150 bushels to the acre; but today through the efforts of our agricultural department it is not unusual for farmers to average 300 bushels to the acre. It is true that there are a great many one-hundred-and-fifty-bushel-farmers toiling away in the old ruts, and it may prove quite impossible to convince them that others raise 300 bushels to the acre; but they do, nevertheless, and some twice three hundred and more. At the experimental farms near Ottawa, Canada, from 600 to 772 bushels of potatoes were raised on an acre, or rather they were raised on a small plot of land at this ratio. With potatoes at $2 per bushel gross returns of over $2,500 per acre can be figured out on paper without trouble.

But if one's land is not adapted to potatoes, strawberries, or onions, suppose we take turnips, mangles, parsnips, peas or beans. A little figuring based upon what has been done on test plots at the agricultural stations will not in any way discourage the beginner in his visionary schemes. Field beans are sowed in rows, and at harvest time they are picked and shipped to market. A quart of salable beans in the pods for every foot length of drill is not high, and if drills are two feet apart returns of one or two thousand dollars an acre can be shown. At one of the experimental stations beans were raised on a test plot which at five cents a quart would make returns at the rate of over $2,500 per acre. At another station 2,000 bushels of mangles were raised per acre, which at the rate of $1 per bushel would certainly make a fancy showing for this common crop.

Illustrations could be multiplied showing the possibilities of agriculture under the most ideal conditions of planting and growth with market rates for the produce



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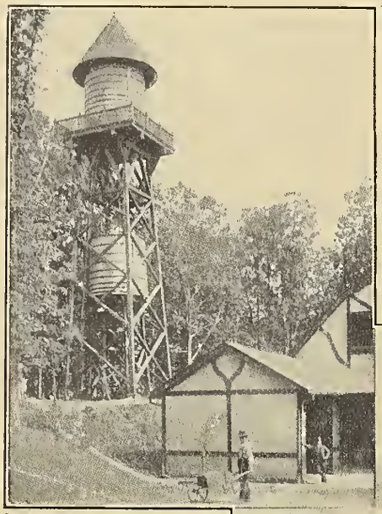
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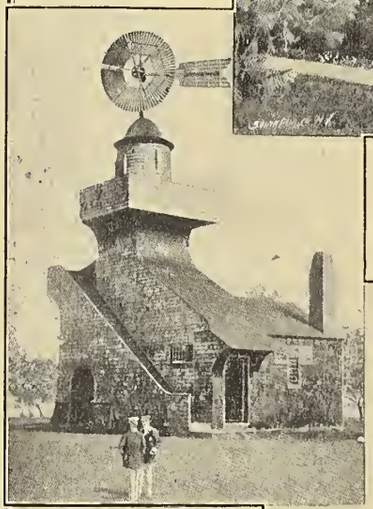
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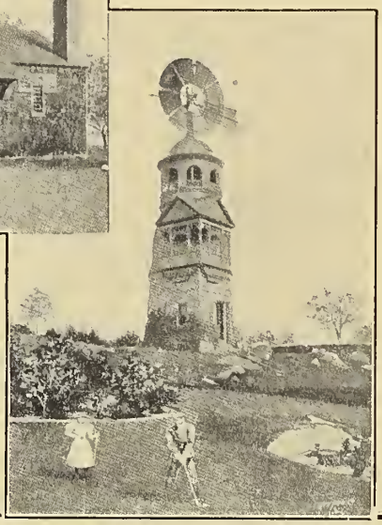
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IS THE CORCORAN IDEA
(Based on 40 years' experience)

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(4) Any size tank possible on a tower and the water supply can never fail.

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abnormally high, but unless the nature of the soil and climate, the careful, intensive culture given to the crop, and the selection of seed, fighting of insects, and the cost of fertilizing, are all considered the reports of the wonderful crops will prove a snare and delusion instead of an intelligent incentive to better work. Farming is a business, and those who have succeeded in it are usually men who apply as much talent and progressive work to it as a merchant does to his business in the city. There is the "strenuous life" on the farm as well as in the city, but it is different in character rather than in degree.

The editor of an agricultural weekly recently took a dinner at a select restaurant in New York, and while waiting to be served made a critical examination of the prices charged for the different fruits and vegetables. He figured out that at the printed rates on the menu card the fruits and vegetables that an ordinary farmer's family of six would consume at a meal would cost between $15 and $18. Carrying the estimates further he discovered that if the farmer sold all his fruits and vegetables at the same price charged the patrons of the restaurant he could easily receive in gross receipts from $20,000 to $25,000 per acre.

Thus we find an exaggerated example of what paper crop profits could be made to show. It may not be more absurd to reason this way than for many owners of stocks and bonds to figure up their imaginary paper profits, but for the sake of the beginner in farming it is highly undesirable that any such misleading statistics should be taken without their proper qualifications. If the exodus from our cities to the country is based upon such ideas of paper profits there will shortly follow more farm foreclosures than those which made Kansas famous a dozen years ago. There will also be a returning tide within a few years of sadder and wiser men. Enthusiasm in farming is highly desirable, but not when it dethrones reason and common sense. Every time there is published a report of enormous rates of profits per acre in fruits or vegetables hundreds, and possibly thousands, figure out the result, and multiply it by ten, twenty or a hundred. According to such arithmetic there seems no earthly reason why the owner of ten or twenty acres should not become independently wealthy within a few years.

While there is no Eldorado in farming there is a good opportunity for a man to make a living and lay something aside each year. There is no easy road to success in cultivating the soil or in running a ranch, but there is a certainty of success where intelligent and persistent hard work is exchanged for it. Modern science has revolutionized farming and gardening, but it has not made it a fit occupation for the fool. It has rather raised it up to the standard where men of ideas and progressive energy can meet it half way and find pleasure and profit in winning out. Nature is a hard task-master until you

win her secret, and then she may be coaxed to yield her hoarded treasures less grudgingly. Natural fitness and training are as essential as self-denial and work in farming as in any other line of business.

The danger of haste to get rich applies to farming as aptly as to high finance in the cities. Paper crop profits are real evils of the day. They strike at the root of a good many of the failures in the country. When large profits are once figured out on paper, it is difficult to accept the actual ones with any degree of satisfaction. The disappointment is apt to sour and discourage the beginner.

The Month's Activities

(*Continued from page 249*)

way to level culture, principally for the reason that the level row, represented by the base of a triangle, exposes less soil surface to the drying action of sun and air, than the two sides of the same triangle in the mound method. In very damp soil, hilling may sometimes be beneficial. Plants in rows are usually several inches to a foot apart—sometimes two or three, as with beans or cabbage. The word drill is often used interchangeably for row.

After planting comes the work of guarding against plant enemies.

In localities where cut-worms—soft, fat, brown worms from one-half to one and one-half inches long—are known to do mischief, they may be fought in one of the following ways. They eat at night and keep out of sight in the daytime, but can usually be found somewhere within a few inches of the plant last cut, and just below the surface of the soil. As any plant cut is usually entirely ruined, it is better to prevent their doing any mischief than to kill them afterwards. Cylinders made of light cardboard, stiff paper or old cans with the bottoms removed, placed about the plants and an inch or so into the soil, will keep them away, or they may be trapped by placing pieces of shingle or small board about, to make shelters under which they hide; or by strewing about bran or grass, with a few drops of molasses and a very light sprinkling of Paris green mixed in. If this bait is applied two or three days before seeds come up, or plants are set, the worms will not be likely to cause any trouble. I go to this length in advising how to combat these pests, because I know from experience how discouraging it is to carefully set out a row or two of thrifty looking cabbage or tomato plants, only to find half of them, a morning or two later, cut off clean, with the severed tops lying there uneaten!

When once your seed is in the ground, and your plants set out, don't feel that there is nothing to be done for a few weeks. Within twelve hours after you have stuck in the last tag and hung up the garden rake, seventy-three and one-half million weed seeds have begun to sprout! Don't give the weeds a start. Begin cultivation at once. Don't make the mistake of

Women Do Not Paint

but they should know something about the paint their painters use.

"I suppose in nine cases out of ten it is the wife who first suggests that the house is looking shabby and needs repainting," said a friend of the Dutch Boy the other day.

"Yes," was the reply, "but she should go farther and interest herself in *how* it is painted. Then she wouldn't have to call John's attention to the shabbiness of the house so often."

When women learn how much *longer*

"Dutch Boy Painter"
Pure White Lead

lasts than ordinary paint, they will insist on its use always, just for the sake of keeping the house looking nice.

Madame, we have some painting literature especially interesting to you — bearing particularly on the usefulness of genuine white lead paint in home decoration. Send for "Paint Helps No. 391" and remember that *a house white leaded is a house well painted.*

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Sun Dial Shop

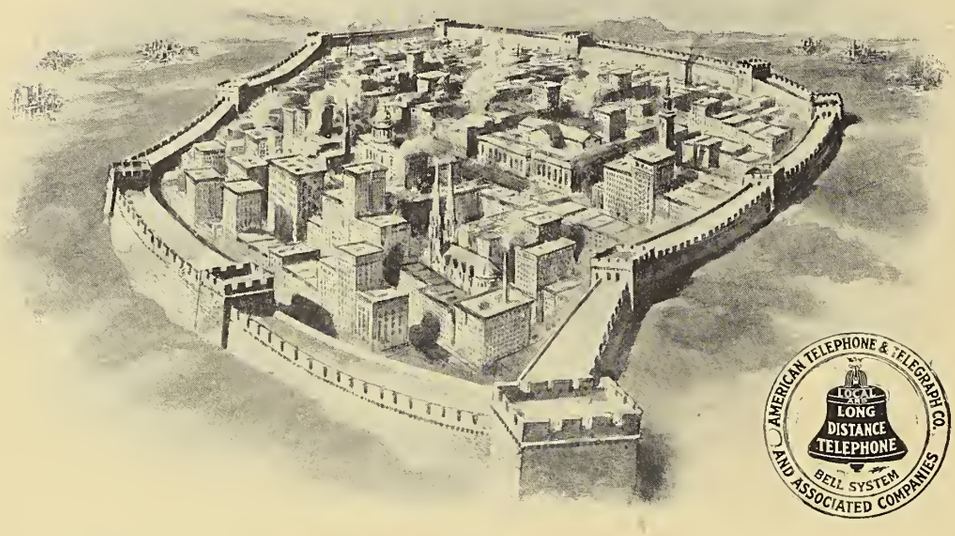
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No community can afford to surround itself with a sound-proof Chinese Wall and risk telephone isolation.

No American State would be willing to make its boundary line an impenetrable barrier, to prevent telephone communication with the world outside.

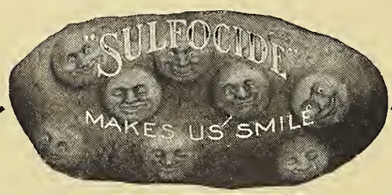
Each telephone subscriber, each community, each State demands to be the center of a talking circle which shall be large enough to include all possible needs of inter-communication.

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10-gal. keg making 2,000 to 5,000 gals. spray, delivered at any R.R. station in the United States for **$12.50.** Prompt shipments. Every grower of fruits and vegetables should have our Report of wonderful results 1910.
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cultivating with the idea of merely keeping the garden free from weeds: this should be of secondary importance only. Cultivate because cultivation makes things grow! Remember that plant food must be available before it does your plants one iota of good. Every time you stir the soil you help to change stored-up plant food into available plant food; you cook a meal for the things in your garden. More than that, it breaks up the little soil tubes through which water escapes from the garden into the air, and thus keeps the moisture where it will help feed your plants—for every grain of food they get must first be dissolved in water. Read the tool article on page 254, and the Garden Department, for further hints in regard to early cultivation.

I have been speaking about the garden of vegetables; but most of the principles involved apply as well to the making of the flower garden. Flower seeds are generally much smaller than vegetable seeds; and in sowing be careful to cover them with very finely sifted soil, and plant where they will not be washed out by heavy rains. It is a good plan to have a seed-bed especially prepared, in which to start the seed, short rows, only a few inches apart. When they are well up, thin out; and later transplant on a cloudy day. Don't let them stay too long in the seed-bed, or they will send down long, thick main roots, known as tap-roots, and then will not readily stand the operation of being moved and replanted.

[*Next month's continuation of this article will take up further details of the flower garden, also the matter of special cultivation for vegetables and the campaign against plant enemies.*—Editor.]

Grass Seed Mixtures and How to Use Them

(*Continued from page 251*)

Kentucky blue grass, wood meadow grass, various-leaved fescue and crested dog's tail. Use thirty-five per cent. of the first two and fifteen per cent. of the last two.

For conditions that require a quick-growing grass, and something that will bind and make a holding upon slopes under difficult conditions, the following is recommended: Kentucky blue grass, 30 per cent.; R. I. bent, thirty per cent.; creeping bent, twenty-five per cent.; sheep fescue, ten per cent., and white clover, five per cent. This is one of the places where white clover is an essential. Under these conditions it fulfils its mission perfectly. While all the named kinds may not flourish, there will be enough to make the work successful.

The turf on a putting-green must be dense and low and tough enough to stand a lot of rough usage. A combination of Rhode Island bent and creeping bent is about the best thing for this purpose. To check up, just refer back to your schedule and see what it says of these grasses.

The soil on a putting-green should be of a sandy nature. This keeps the grass

stunted through lack of much food, and consequently better fits it for its purpose.

Never buy grass seed by the bushel. Buy it by weight or stipulate that there shall be so many pounds to the bushel. It will cost you a high price, but it will be far cheaper in the end than to buy something inexpensive that has more than a third of sweepings and useless bulk. You certainly lose nothing by buying the very best seed that your dealer can offer you.

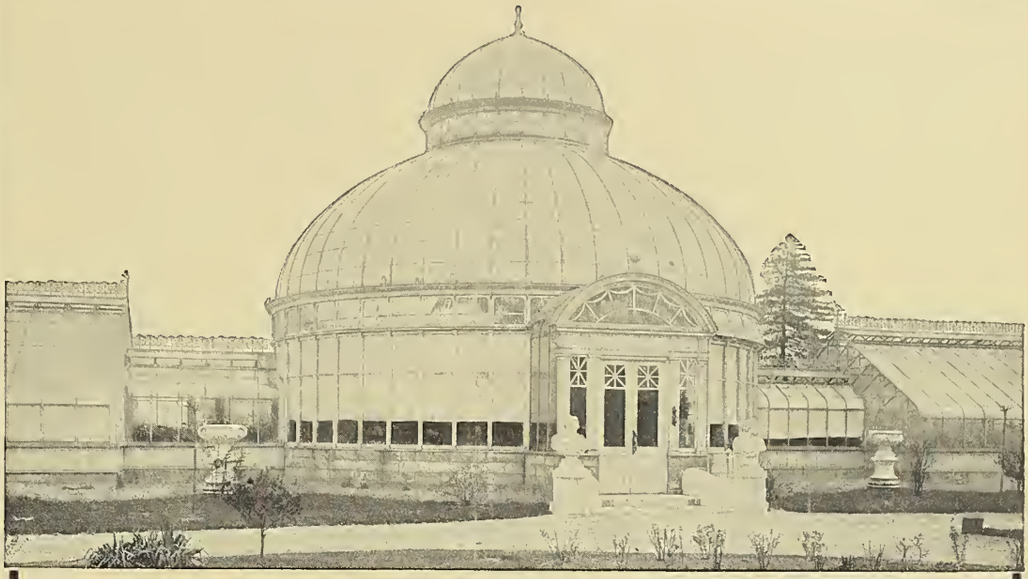
Don't be ashamed to ask for samples before buying, and also get samples from a number of places and compare the different seeds. Spread them out in your hand and see if they are clean and without chaff. A seed with a large proportion of dust and chaff is not worth buying. It should be your consideration to see whether you are getting what you pay for. If you show evidences of knowing the proper goods you will receive a most respectful hearing from the tradesman. Don't balk at the price of re-cleaned seed. It means that you are going to get something for your money. It is worth much more than the seed sold in bulk that is not re-cleaned.

After you have succeeded in getting the right kind of seed don't think that this means that the preparation of the soil to receive it can be slighted. Have your soil as deep and rich as possible, and keep in mind the fact that a roller is a most useful implement to have about the place and to use frequently on the lawn. Good seed, good soil and a good roller are a combination that will produce results that will last. If you want a lawn you must work for it.

Watch for the weeds, and when they appear dig them out and sprinkle grass seed on the spot they were dug from. Watch particularly for crab grass. It keeps so close to the ground that the lawn-mower does not touch it. Before it goes to seed take a rake and tear it out. If you wait until it seeds, the crop for the next year will have been already planted. It is a terrible pest in the lawn and must be fought hard. In the fall it leaves great patches of bare ground where it has grown. In removing dandelions go down deep for them, otherwise you make many where there was only one.

A lawn should be cut just as often as it needs it. You cannot make a hard-and-fast rule for this. Cut and roll the lawn often. In extremely hot periods don't set the knives of the mower too low. Raise them a little to avoid exposing the roots of the grass too much. Let your first cutting be early, and the last one so that the grass will not be left too long for the winter. And don't forget that the roller is a good thing to push over the grass *frequently*.

When a lawn needs moisture it should be given in a practical way, so that you neither fool yourself nor the lawn as to the efficiency of the operation. Ordinary sprinkling will not do, for the simple reason that the water will have evaporated before it has had a chance to get near the roots of the grass. Hours with a sprinkler doing its prettiest will not answer. On



Erected for H. J. HEINZ, Pittsburg, Pa.

Build Your Greenhouse U-Bar Way

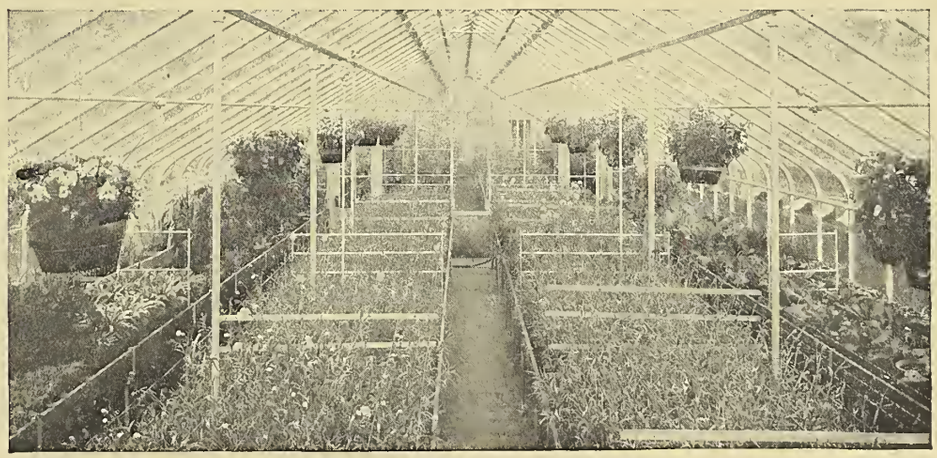


Build it that way because it has a complete steel frame of U-Bars which makes it possible to do away with the heavy framing members necessary in other houses. That's why U-Bar houses are lighter; and the lighter your greenhouse the more and better flowers you can grow. And it costs less to grow them. This very lightness so essential for a return on your investment likewise makes them the attractive houses they are.

Circular Palm Houses like this one have never been attempted with other constructions —it is distinctly U-Bar.

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If you want to talk things over at once, we will gladly send one of our skilled greenhouse men to go into the matter thoroughly with you.



A carnation interior. Note the lightness of construction.

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PENNSYLVANIA Quality LAWN MOWERS

"PENNSYLVANIA" *Quality* Lawn Mowers

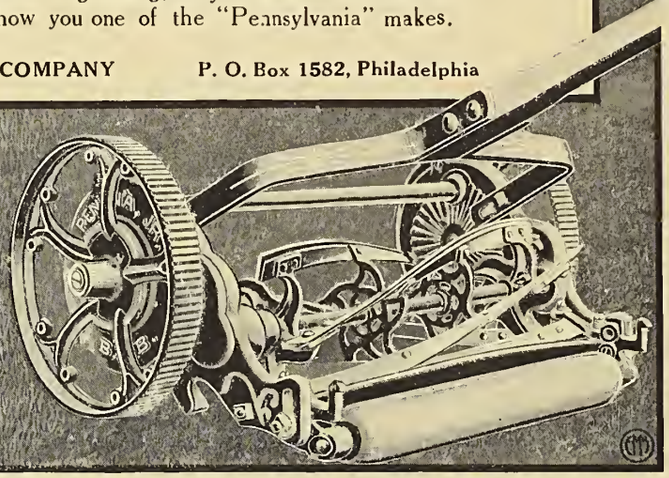
ARE always sharp, because they have crucible tool-steel blades, hardened and tempered in oil. The kind of steel used in making all high-grade cutting tools. No other Mowers use this grade of steel; that is why "Pennsylvania" Quality Mowers have been in a class by themselves for 35 years.

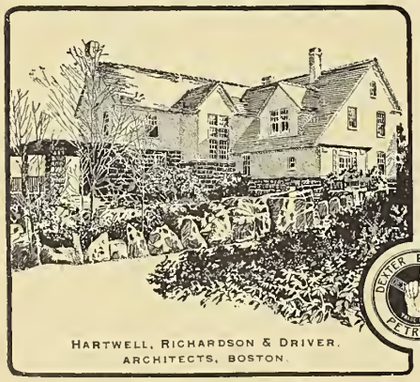
If you want an *actual* self-sharpening Mower, that will do thoroughly first-class work almost indefinitely, without the constant expense of re-grinding, ask your hardware dealer or seedsman to show you one of the "Pennsylvania" makes.

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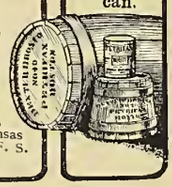
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a deep-soil lawn the roots are well down, and the only way to have the water reach them is to let it run from a hose lying on the grass, for hours at a time. Any one having a pretty lawn-sprinkler may not believe this, but it can be easily proved. In cases where the soil on the lawn is shallow the roots, being high, may be reached by the sprinkler process, but it is a good rule to follow with the open hose. As a little test try the following: In a dry time, after the sprinkler has been working over hours, dig up a small piece of the lawn and test the depth to which the moisture has penetrated. You will find that it has gone down but a few inches, and the next day's sun will take up all this water in a couple of hours.

In using fertilizer great care should be used not to overdo it. If you have a deep soil that is rich in humus, you will need but little in the way of fertilizers. An application of Canada hard-wood ashes in the spring will be all that is necessary to help the soil and give color to the grass. The ashes sweeten the soil while stimulating the growth of the grass. In buying these ashes insist on having a guaranteed amount of potash. Otherwise you may get as low as a half of one per cent., and in some cases you cannot find a trace of potash. The potash is what you want for the soil.

Nitrate of soda, applied in liquid form, produces quick results. Use it before a rain in the dry form—about 175 pounds to the acre, or dissolved, three pounds to 100 gallons of water. As said above, fertilizers are not necessary for many years if a lawn has been properly made, but the inducements to use them are so convincing that a large amount of money can be thrown away in just this way.

Garden Tools That Pay Their Way

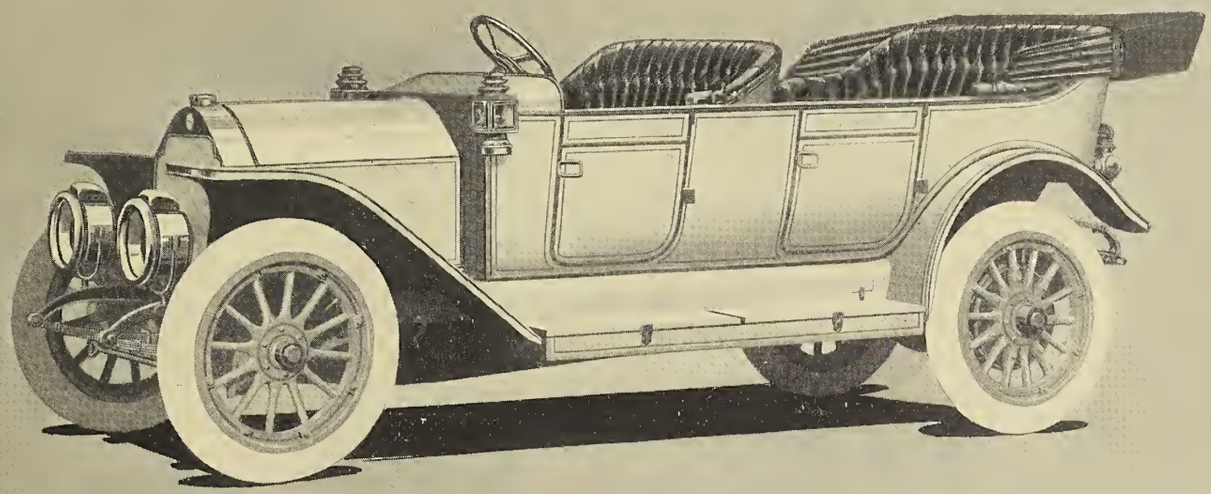
(*Continued from page* 255)

never put them away soiled and wet. Keep the cutting edges sharp! There is as much pleasure in trying to run a dull lawnmower as in working with a rusty, battered hoe. Have an extra handle in stock in case of accident; they are not expensive. In selecting hand tools, always pick out those with handles in which the grain doesn't run out at the point where there will be much strain in using the tool. In rakes, hoes, etc., get the types with ferrules and shank one continuous piece, so as not to be annoyed with loose heads.

Spend a few cents to send for some implement catalogues. They will well repay careful perusal, even if you do not order this year. In these days of advertising, the commercial catalogue often contains matter of great worth, in the gathering and presentation of which no expense has been spared.

As a final word to the intending purchaser of garden tools, I would say, first, thoroughly investigate the different sorts available and when buying, don't forget

(*Continued on page* 282)



"Stoddard-Dayton"

NONE can go further—none faster—none ride with greater ease and comfort—none have ever given better service. Above we illustrate the Model 11-F Four-Door Touring Car, with Top, $3125. Smaller model on same lines, $2520.

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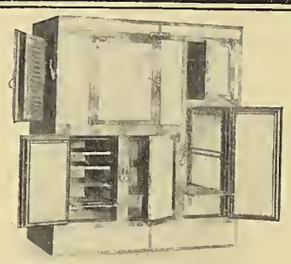
give; in preserving individual flavors and aromas; in imparting a delightful thirst-satisfying coolness that makes the good things better and the crisp things snappier, more appetizing and deliciously stimulating.

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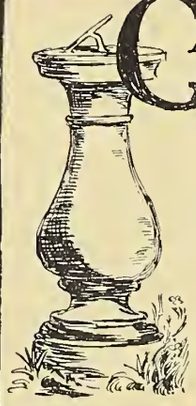
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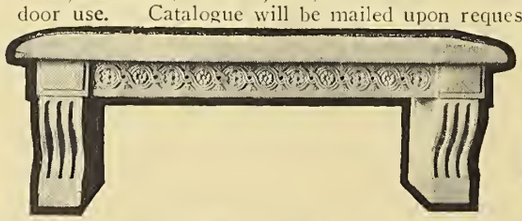


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GALLOWAY TERRA COTTA CO.
3218 WALNUT ST. PHILADELPHIA

(*Continued from page* 280)

that a good tool or a well-made machine will be giving you satisfactory use long after the price is forgotten, while a poor one is a constant source of discomfort. Get good tools and take good care of them. A few dollars a year, judiciously spent for tools that are afterwards well cared for will soon give you a complete set, and add materially both to your garden profit and your garden pleasure.

Grow Your Own Fruit

(*Continued from page* 261)

the work can be more thoroughly done, especially in uneven ground. After the sheet is placed, with a stout club or mallet, padded with a heavy sack, or something similar, to prevent injury to the bark, give a few sharp blows, well up from the ground. This work should be done on a cloudy day, or early in the morning—the colder the better, as the beetles are then inactive. If a considerable number of beetles are caught, the operation should be repeated every two or three days. Continue the treatment as long as any beetles are to be caught. Peaches are troubled also by borers, in this case indicated by masses of gum, usually about the crown. Dig out or kill with a wire, as in the case of the apple borer. Look over the trees for borers every spring, or better every spring and fall. Another peach enemy is the "yellows," indicated by premature ripening of the fruit, and the formation of stunted leaf-tufts of a light yellow color. This disease is contagious and has frequently worked havoc in whole sections. Owing to the work of the Agricultural Department and the various State organizations it is now held in check. The only remedy is to cut and burn the trees, and replant, in the same places if desired, as the disease does not seem to be carried by the soil.

Pears are sometimes affected with a scab similar to the apple scab, and this is combatted by the same treatment—three sprayings with Bordeaux. For a blight which causes the leaves suddenly to turn black and die, and also kills some small branches, and produces sores or wounds on large branches and trunk, cut and burn all affected branches and scrape out and clean all sores. Disinfect all sores with corrosive sublimate solution—1 to 100—or with a torch, and paint over at once.

Plums have many enemies, but fortunately they can all be effectively checked. First is the *curculio*, to be treated as described above. For leaf-blight—spotting and dropping off of the leaves about midsummer—spray with Bordeaux, within a week or so after the falling of the blossoms. This treatment will also help to prevent fruit-rot. In addition to the spraying, however, thin out the fruit so that it does not hang thickly enough for the plums to come in contact with each other. In a well kept and well sprayed orchard, black-knot is not at all likely to appear. It is very manifest wherever it starts, caus-

(*Continued on page* 284)

Andrews Septic Sewage Disposal



The Andrews System
OF SEWAGE DISPOSAL

Is by Septic Tank, as shown in the illustration. Cesspools are no longer tolerated by sanitary science. They are the cause of much sickness, but the Septic Tank is a scientific method of sewage disposal in which the bacteria that cause disease destroy the dangerous elements in the sewage and in the end destroy themselves.

We have a patent Steel Tank, all complete, ready to bury in the ground and connect to.

Send Plans or Rough Sketch of your house and grounds for FREE ESTIMATE.

From Factory to User

Andrews' Big Book on Heating, Plumbing and Air Pressure Water Supply sent FREE. Please send names of two parties who might buy.

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1160 Healing Bldg., MINNEAPOLIS, MINN.

Aphine

The Insecticide that kills plant Lice of every species

Can be used in House and Garden

Aphine is a concentrated liquid spraying material easily diluted with water It can be applied to foliage flower, fruit or vegetable.

"We know of no insecticide which has more quickly demonstrated its efficacy than the recently introduced Aphine, which, in the course of a comparatively short time, has become a talisman among horticulturists of unimpeachable veracity and unquestioned skill."—"Horticulture," Boston, Mass., Nov. 6th, 1909.

"Our outdoor roses were badly infested with aphis. With the first application of Aphine the pest was entirely destroyed."—John McLaren, Superintendent Golden Gate Park, San Francisco.

"I have given Aphine a very thorough trial on plants infested with aphids and find it works successfully; in fact, have found nothing that compares with it."—E. B. Southwick, Entomologist, Dept. of Parks, New York City.

"I have used Aphine on orchard tress and ornamental plants infested with scale, green and white fly, thrip, mealy bug, etc., and found, in every case, that it completely destroyed the pests in question, with not the slightest harm to the subjects treated. It is without doubt the finest insecticide I have ever used."—William Munro, Supt. to C. T. Crocker, San Mateo, Cal.

SOLD BY SEEDSMEN.

Gallon $2.50 - Quarts $1.00 Pint 65c Half Pint 40c

If you cannot obtain Aphine in your community we will send you, express prepaid, on receipt of remittance, a half-pint for 50c, pint 75c, quart $1.25. Try your dealer first, but do not accept anything "just as good."

Aphine Manufacturing Company
MADISON, N. J.

The Water Question Settled.

We probably know more about water-supply questions than you do, for we have spent seventy years in learning.

Forty thousand customers have followed our advice, and put in Reeco Pumps — and they are glad.

We will show you what can best be done in your own case, after studying your water-supply and the needs of your establishment. Then you will be told what you need, and what it will cost.

The beauty of the Reeco Pumps is that they do the work without tinkering, bother, or repairs. They are Everlastingly "on the job," and "making good". - if you'll pardon expressive slang.



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(Also makers of the famous "Reeco" Electric Pumps.)



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This $2,000.00 will be divided into 203 monthly prizes for the biggest fish caught each month and grand prizes for the entire season in each class. Prizes include $60 silver cups, silver medals, high class rods and reels, guns and sportsman's equipment.

List of prizes and conditions of contest published each month in FIELD AND STREAM. As you will want to read the accounts each month of How, When, Where and with what tackle these big fish were killed, we are going to make you a special introductory offer of a three months' trial subscription to FIELD AND STREAM, together with the 1911 Angler's Guide, the best book on fishing published, telling how, when and where to fish, including the latest Game and Fish Laws for 1911 and a five-foot split bamboo bait casting rod, } **All for $1.00**
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"MODERN PLUMBING"

contains illustrations showing 24 modern bathroom interiors, ranging in cost from $74 to $3000. Sent on request with 4 cents to cover postage.

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PRATT'S "SCALECIDE"

Will positively destroy SAN JOSE SCALE and all soft bodied sucking insects without injury to the tree. Simple, more effective and cheaper than Lime Sulphur. Not an experiment. One gallon makes 16 to 20 gallons spray by simply adding water.
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For Interior Floors Vestibules, Porches, Terraces. They harmonize with every color scheme and are permanent, durable and easily cleaned.

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For Stable Floors, Approaches, Areas under Porte Cocheres, and laid in designs around Sun Dial pedestals are most attractive.

All information on application

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(*Continued from page* 282)

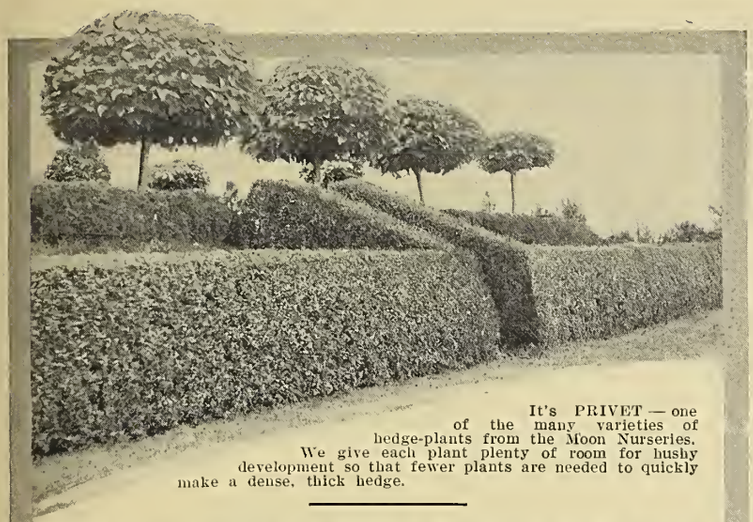
ing ugly, black, distorted gnarls, at first on the smaller limbs. Remove these and burn *immediately*, and keep a sharp watch. As this disease is supposed to be carried by the wind, see to it that no careless neighbor is supplying you with the germs.

As will have been seen from the above, spraying poisons are of two kinds; those that work by *contact*, which must be used for most *sucking* insects and germs and fungous diseases; and those that poison internally, used for leaf-*eating* insects. Of the former sorts, Bordeaux mixture is the standard, although within the last few years it has been to a considerable extent replaced by lime-sulphur mixtures, which are described below. Bordeaux is made in various forms. That usually used is the 5-5-50, or five pounds copper sulphate, five pounds *unslaked* lime, fifty gallons water. To save the trouble of making up the mixture each time it is needed, make a stock solution as follows: Dissolve the copper sulphate in water at the rate of one pound to one gallon. This should be done the day before, or at least several hours before, the Bordeaux is wanted for use. Suspend the sulphate crystals in a cloth or old bag *just below the surface of the water*. Then shake the lime in a tub or tight box, adding the water a little at a time, until the whole attains the consistency of thick milk. When necessary add water to this mixture if it is kept a considerable time; *never let it dry out*. When ready to spray, pour the stock copper sulphate solution into the tank, in the proportion of five gallons to every fifty of spray required. Add water to amount required. Then add stock lime solution, first diluting about one-half with water and *straining*. The amount of lime stock solution to be used is determined as follows: At the druggist's get an ounce of yellow prussiate of potash dissolved in a pint of water, with a quill in the cork of the bottle so that it may be dropped out. (*It is poison.*) When adding the stock lime solution as directed above, do so until the prussiate testing solution when dropped into the Bordeaux mixture *will no longer turn brown*. Add a little lime to be on the safe side. All this sounds like a formidable task, but it is quite simple when you really get at it. Remember that all you need is a few pounds each of quick-lime and copper sulphate, an ounce of prussiate of potash and a couple of old kegs or large pails in which to keep the stock solutions.

Lime-sulphur mixtures can be bought or mixed by the home orchardist. They have the advantage over Bordeaux that they do not discolor the foliage or affect the appearance of the fruit. Use according to directions, usually about one part to thirty of water. These may be used at the same times, and for the same purposes as Bordeaux.

Lime-sulphur wash is used largely in commercial orcharding, but it is a nasty mess to prepare, and must be used in late fall or winter. For the home orchard one

(*Continued on page* 286)



It's PRIVET — one of the many varieties of hedge-plants from the Moon Nurseries. We give each plant plenty of room for bushy development so that fewer plants are needed to quickly make a dense, thick hedge.

DO your planting now. We can help you to do it quickly and inexpensively with our splendidly developed specimens. We've had thirty-nine years' experience.

"Moon's Hardy Trees and Plants for Every Place and Purpose"

Our catalogue for 1911, tells of the 2,000 varieties of out-door plants in our 400-acre nursery. It is abundantly illustrated and full of information valuable to the professional as well as to the amateur landscape gardener. Free on request.

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When Planting Your Garden

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Complete cultural instructions for growing all kinds of vegetables from seed time to harvest.

73d annual edition increased to 288 pages, nearly 1,000 illustrations, 8 color and duotone plates. Describes over 1,200 varieties of Flower Seeds, 600 of Vegetables, 2,000 of Plants, besides Hardy Shrubs, Small Fruits, etc.

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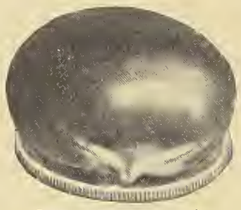
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It will tell you things of deep interest if you are building. A dime will also bring samples of the natural woods done in walnut, mahogany or oak. Tell us your architect's or dealer's name when you write. Please write tonight.

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Covers a 50c piece.

You can get bigger profits per acre from Sober Paragon Chestnuts than from any other crop.

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These qualities combined and developed by science to a degree that closely borders perfection, in the new

SOBER PARAGON

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Crop, Fall of 1910, brought $48,000, orchard only *8 years old.*

The only large ***sweet*** chestnut in the world.

Bears the second year. The nuts average 1 to 2 inches in diameter—and 3 to 5 nuts in a burr.

United States Pomologist, G. B. Brackett, says "The Sober Paragon comes the nearest in quality to the native chestnut of any of the cultivated varieties that I have examined. It is of large size, fine appearance and excellent flavor."

Testimony from growers, commission merchants, Forestry Experts, etc., given in our ***free booklet,*** together with prices and particulars.



We own exclusive control of the Sober Paragon. This copyrighted metal seal is attached to every genuine tree when shipped.

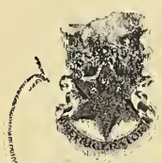
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Our 1911 illustrated Catalog and *Planting Guide,* with prices—*Free.*

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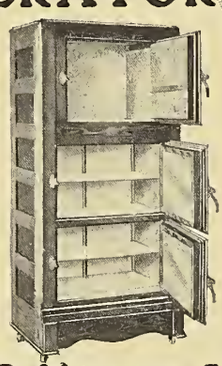


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Preserve your food better and use less ice than other makes because of their wonderful one-way circulation of pure, cold, dry air, which is constantly forced around the articles stored, purifying and cooling every inch of the refrigerator.

A cheap refrigerator costs nearly as much as a good one at the start. It endangers your health, wastes ice, and spoils food, and is worn out when a Baldwin high-grade Refrigerator is in its prime, and many Baldwins in constant use for 35 years are still giving the utmost satisfaction.

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Are lined with snow white opalite glass 7-16 inch thick; vitrified porcelain or metal. There are 150 styles in stock. Specials made to fit your space.

Don't experiment, buy a lifetime of satisfaction, not a term of annoyance. Ask your dealer to show you a Baldwin.

Write today for beautiful catalogue.

The Baldwin Refrigerator Co.

38 Lake Street, Burlington, Vt.

(*Continued from page* 284)

of the miscible oils now advertised will be found more satisfactory. While they cost more, there is no time or expense for preparation, as they mix with cold water and are immediately ready for use. They are easier to apply, more comfortable to handle, and will not as quickly rot out pumps and spraying apparatus. Like the sulphur wash, use only during late fall and winter. Kerosene emulsion is made by dissolving Ivory, soft, whale-oil or tar soap in hot water and adding (away from the stove, please!) kerosene or crude oil: proportions, one-half pound soap, two gallons kerosene. Immediately place in a pail and churn or pump until a thick lathery cream results. This is the *stock solution;* for use dilute with five to fifteen times as much water, according to purpose applied for; on dormant fruit trees, five to seven times; on foliage, ten or even fifteen.

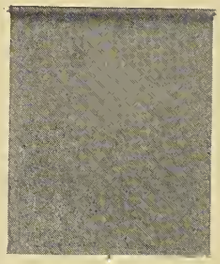
Of the poisons for *eating* insects, arsenate of lead is the best for use in the fruit orchard, because it will not burn the foliage, as Paris green is apt to do, and because it stays on longer. It can be used in Bordeaux and lime-sulphur mixtures, thus killing two bugs with one spray. It comes usually in the form of a paste, though there is now a brand in *powder* form, which I have not yet tried. This should be worked up with the fingers (it is not poison to touch) or a small wooden paddle, until thoroughly mixed, in a small quantity of water and then *strained* into the sprayer. Use, of the paste forms, from one-quarter to one pound in twenty gallons *clear* water.

Paris green is the old standard. With a modern "duster" it may be blown on pure, without burning, if carefully done. Applied thus, it should be put on during a still morning before the dew goes. It is safer to use as a spray, first making a *paste* with a small quantity of water and then adding balance of water. Keep constantly stirred while spraying. If lime is added, weight for weight with the green, the chances of "burning" will be greatly reduced. For orchard work, one pound to one hundred gallons water is the usual strength.

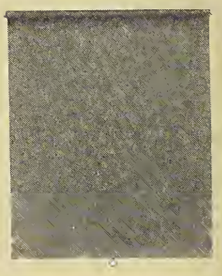
The accompanying table will enable the home orchardist to find quickly the trouble with, and remedy for, any of his fruit trees, and should be kept for reference.

The quality of fruit will depend largely upon the care used in picking and storing. Picking carelessly done, while it may not *at the time* show any visible bad results, will result in poor keeping and rot. If the tissue cells are broken, as many will be by rough handling, they will be ready to cause rotten spots under the first favorable conditions, and then the rot will spread. Most of the fruits of the home garden, which do not have to undergo shipping, will be of better quality where they ripen fully on the tree. Pears, however, are often ripened in the dark and after picking, especially the winter sorts. Apples and pears for winter use should

(*Continued on page* 288)



AN ORDINARY SHADE UP ONLY A FEW MONTHS AND ALREADY CRACKED.



A BRENLIN SHADE, WON'T CRACK. WON'T FADE.

BRENLIN

Window Shades Won't Crack Won't Fade

Ordinary shades crack because they are stiffened with a "filling" of chalk or clay, which breaks, falls out and leaves unsightly streaks and pinholes.

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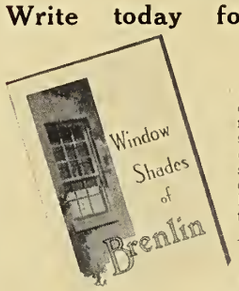
It is supple, not stiff. Yet in the darker colors it affords absolute privacy; in the lighter colors, it admits a soft and mellow glow.

It won't fade—

Won't wrinkle—

The name BRENLIN is perforated along the edge of every yard.

Write today for this book and samples



This book contains valuable suggestions on the artistic treatment of windows and shows actual samples of this new window shade material in all colors and in Brenlin Duplex. Get the book to-day.

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Prof. Craig.

A course for Homemakers and Gardeners taught by Prof. Craig and Prof. Batchelor, of Cornell University.

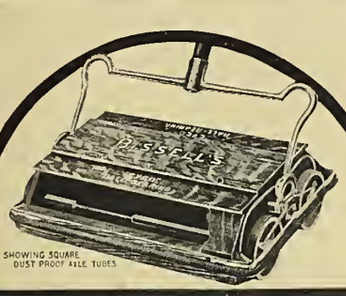
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A knowledge of Landscape Gardening is indispensable to those who would have the pleasantest homes.

250 page Catalogue free. Write to-day.

THE HOME CORRESPONDENCE SCHOOL

S.A Dept. 226, Springfield, Mass.



BISSELL'S
NEW "Cyco" BALL BEARING
Carpet Sweeper

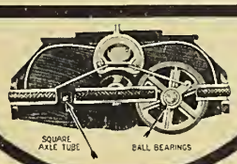
THE very latest triumph in carpet sweeper mechanism. Runs so easily a child can operate it, and does the work with a thoroughness and dispatch never approached by any other sweeper. Another new, valuable feature contained in this sweeper is the SQUARE Dust-Proof Axle Tubes that enclose the axle rods and prevent threads or ravelings from winding about the axles, also maintain the uniform position of the brush to the surface of the carpet, and insure a positive rotation of the brush under all conditions.

Never before have Ball Bearings been successfully applied to a carpet sweeper, the great obstacle being to bring the cost within the reach of the masses. This we have at last accomplished, and are able to offer a genuinely efficient Ball Bearing sweeper at a price that brings it within the range of every household.

Ask for BISSELL'S new "Cyco" BALL BEARING sweeper. For sale by the best trade everywhere. Price, 2.75 to 5.75. Booklet upon request.

BISSELL CARPET SWEEPER CO.
Dept. 131, Grand Rapids, Mich.
(Largest and Only Exclusive Carpet Sweeper Makers in the World.)

End view of sweeper with one wheel off, showing end of SQUARE Axle Tube and method of applying BALL BEARINGS to Driving Wheels which are forced tightly against the brush pulleys, thus insuring a positive rotation of the brush. SQUARE Axle Tubes permit a free vertical as well as lateral action of the Axle Rods and Wheels and allow the sweeper to adjust itself to all grades of carpets. (1)



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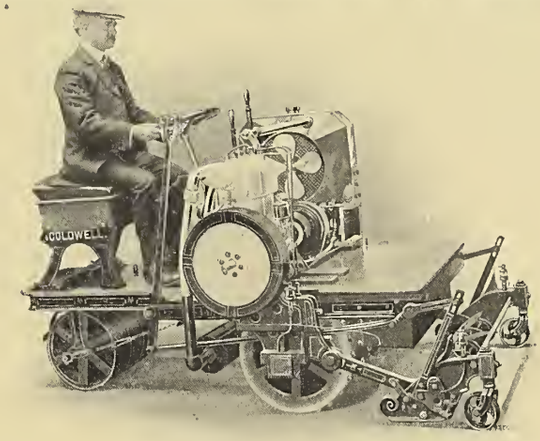


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You should not miss seeing Feb., Mar., Apr., May, June and July numbers, and although the *regular* price is $1.50, we make a **special offer** of $1.00 for the entire set of six, if you order before February and March copies are all sold. Send your order to-day; to-morrow may be too late.

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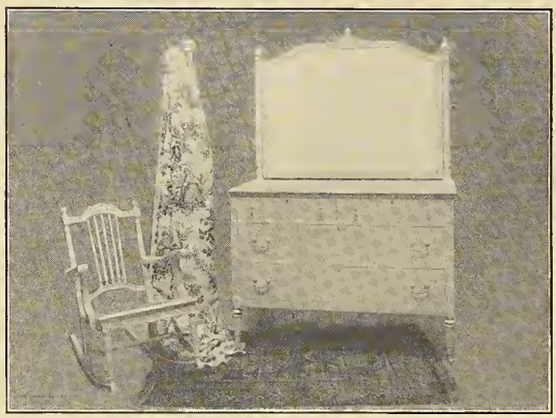
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(*Continued from page* 286)

be kept, if possible, in a cold, dark place, where there is no artificial heat and where the air will be moist but never wet, and where the thermometer will not fall below 32 degrees Fahrenheit. Upon exceptionally cold nights the temperature may be kept up by using an oil stove or letting in heat from the furnace cellar, if that is adjacent. In such a place, store loose, on ventilated shelves, not more than six or eight inches deep. If they must be kept in a heated place, pack in tight boxes or barrels, being careful *to put away only perfect fruit;* or pack in sand or leaves. Otherwise they will lose much in quality by shriveling, due to lack of moisture in the atmosphere. With care, they may be had in prime quality until late in the following spring.

Do not let yourself be discouraged from growing your own fruit by the necessity of taking good care of your trees. After all, you do not have to plant them every year, as you do vegetables, and they yield a splendid return on the small investment required. Do not fail to set out at least a few this year with the full assurance that your "satisfaction is guaranteed"—by the facts in the case.

What Planting Does for a House

(*Continued from page* 263)

sort of soil. Fall planting of the tubers will insure blossoms the following summer usually, but the growing plants may be set out in the spring and even small ones will blossom the first year. The two varieties, *Hemerocallis flava* and *H. fulva,* will carry the bloom over a period of from seven to eight weeks, beginning about the first week in June. *Hemerocallis fulva* is not fragrant, however, and for it the variety *Thunbergi* may be substituted. This has not quite so large and showy flowers sometimes as *flava* but it is very like it, only later-flowering. *Hemerocallis flava* is three feet high, *Hemerocallis fulva* and *Thunbergi* from four to five.

Hollyhocks, foxgloves, columbines and Canterbury bells are a few of the standards which come easily from seed. They may be started indoors and transplanted in the spring or sown in the border during the summer to furnish the next summer's bloom. These belong to the great class of perennials which must be set out—if bought from a nursery—in the autumn, in order to secure the next season's bloom. Spring planting unsettles them for that summer and accomplishes nothing in the way of time saving.

Among shade trees the fastest-growing is perhaps the catalpa; and this is, too, one of the most showy, with large trusses of white flowers covering it in July. It is adaptable to almost any soil and its shade is very dense, as the large heart-shaped leaves overlap.

Everyone knows the merits of the poplar as a rapid-growing tree, but unfortunately many affect to despise it. It is true that plantings of poplar alone are not de-

(*Continued on page* 290)

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"Your Home and its Decoration" is an attractive 200 page book filled with practical hints on home decoration. Contains 12 beautiful color plates and 130 other illustrations. Everyone interested in correct home decoration should have a copy of this book. Price $2.00. Postage 15c. extra.



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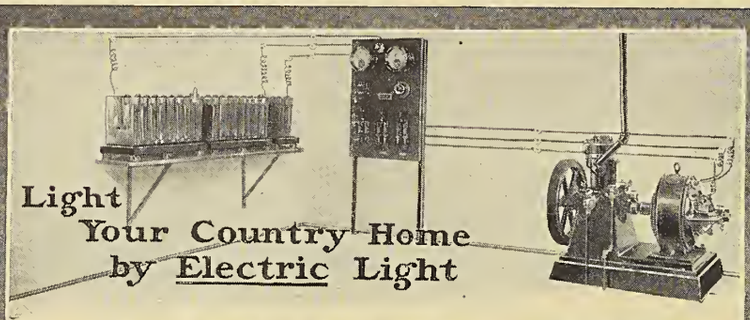
which tell all about ONE HUNDRED FAMOUS CALIFORNIA HOMES—mostly Bungalows. They contain Photographs, Floor Plans, Descriptions and Estimates of Cost. The very latest practical ideas in home planning—no freaks or extremes. All are artistic, sensible houses and can be built everywhere. Architects' plans, $5 and $10. If you are going to build, get these books at once or send stamps for sample pages.

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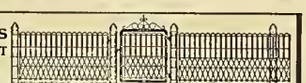
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KILL them before they can do any harm—Kill them before they can multiply. Spraying is the most effectual way. If thoroughly done at the right time with the right spraying fluid, results are positive.

Send for our Inspector to come and look over your trees at once and give you an estimate for the work. At the same time he can advise you as to the condition of your trees. He will point out where pruning and bracing would be advisable. Locate decay cavities that are a menace. Then if you wish, we will send our expert tree men to do the work.

After it is done we will inspect it several times during the year—at no cost to you. This is the guarantee side of our service. It is tree insurance for you. Let our Inspector come soon as possible and get things started. Send for our booklet, "Trees: The Care They Should Have."

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CHICAGO: 303 Monadnock Bldg.

(*Continued from page 288*)

sirable, but two or three or more, well disposed, break a sky line and perfect a composition as no other trees can.

Willows offer another form of growth, quite as picturesque in their way, the exquisite soft grace of the weeping willow holding for me always a hint of mystery and enchantment not to be found in any other growth. They afford splendid shade too, in spite of their airy delicacy.

Evergreens bring the quickest results, as far as the sense of age goes; and their effect independent of this cannot be overestimated. Arbor vitae transplants the most readily of all perhaps, though hemlock and red cedar may usually be depended upon to succeed. Of the three the cedar is most likely to suffer by being moved and it does not grow as rapidly as the others, but it will thrive on any soil, practically anywhere.

With the vines mentioned and the perennials, used as suggested through the shrubbery border, an effect of real charm may be secured the very first year, which the second year will of course carry along tremendously. Add to these some groups of arbor vitae which, dug with a ball of earth, may safely be transplanted up to a height of five feet; or some hemlocks the same size, and perhaps a pair of box bushes three feet high, to flank the entrance, and the beginning of a real home is so well made that the place will be remarked by all who visit or see it. This, too, at the end of one year.

The shade trees will not do much in the way of actual growth until the second season—unless they too are autumn-planted—but by their second summer there will be a great lengthening of branch on every side. And by the third year, if things are well tended and they were properly planted when they came from the nursery, trees, both evergreen and deciduous, shrubs and flowers will all have united with such harmony of purpose that the result will be incredible, when the barren beginning is recalled.

The All-Star Garden of a Business Man

(*Continued from page 243*)

the high standard of attractions that your all-star garden has set. Avoid the pale purple shades in favor of pinks, cherry reds and plenty of white. Jeanne d'Arc is one of the best white late-flowering varieties. In choosing other colors take the late-flowering ones in order that the showing may not rival that of the July and August stars.

Late in October and during the first half of November the choice of attractions is decidedly limited, but the hardy chrysanthemum fortunately gives us a variety and beauty of bloom that needs no apologies whatever. Here again I would advise a choice from the wealth of varieties that will be shown at one of the fall exhibitions. The names alone mean little or

(*Continued on page 292*)



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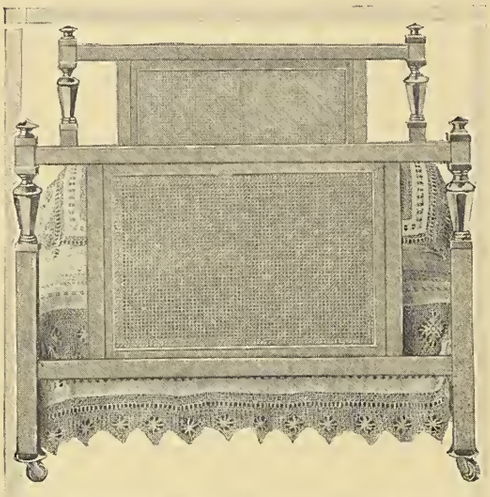
The designer, being a native of California, has imbibed the spirit of the true bungalow art; not only thru association, but also by actual construction. This art has been applied in adapting the bungalow to the requirements of the northern climates.

The book is bristling with interest and suggestions for the builder of either a suburban cottage or a city residence.

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Let us send you our spring Style Books and samples of tubing which will teach you the amazing difference between our ***solid brass*** and the veneered iron pipe in beds made to sell. Ask for them today.

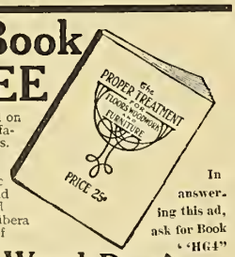
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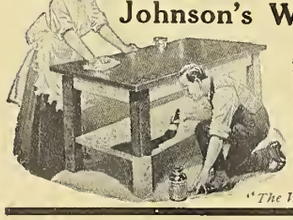
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"The Wood Finishing Authorities"

(*Continued from page 290*)

nothing. Order plants to be delivered May first. Once set in place they will need no further attention.

With the suggestion that the business man plant a few shrubs for winter cheer—the sumach and the barberry, for instance, I will leave him to his exceedingly light labors and his most abundant rewards.

Effects That May Be Had With Shrubbery This Year

(*Continued from page 265*)

soil than dry roots into a wet, soggy soil. The soil should be moderately moist, however. When there is delay in setting plants keep them in a cellar with moist earth at the roots. If they have dried very much, it will be helpful to let the roots of roses and such plants soak in tepid water for an hour before planting.

Have the soil rich with leaf mould, well rotted manure or bone-meal not prepared with acid. After the plants are set give them water about the roots.

The soil should be kept loose above the roots of shrubbery until they have become mature plants, at least.

When planting shrubbery near hedges, it is well to protect it from hedge roots by sinking planks in the soil on the hedge side to a depth of two feet.

Applications of soot about the blooming plants have a tendency to deepen the color.

Annuals That Should Be Better Known

(*Continued from page 267*)

shades, is the best for the garden and, though it comes into flower very quickly, it is well to give the seed a little start of the season. The schizanthus is especially valuable for filmy effects—to lend lightness to the garden.

I should be the last one to drive the common morning-glory from the garden, for I shall ever regard it as among the loveliest of all annuals. But there are far greater glories of the dawning day. Most magnificent of all is the *ipomea,* known as the Japanese morning-glory. In Japan it is one of the chief cultivated flowers, being grown a great deal in pots for immense specimen blooms. The superb coloring of the blossoms, as well as the greater luxuriance, makes it vastly superior to the ordinary type. Notably beautiful are the deep blue and solferino varieties with a wide margin of white and the ashes-of-roses shade. The pity is that reliable seed is somewhat a matter of chance; I, myself, have had both the best and the worst of luck. So far as I can see the sole solution of the problem is to keep on trying until you secure a superior strain and then save your own seed from the choicest blooms. Any failures will be lost sight of in ultimate success. A nickel will buy a package of mixed seed, but half a dollar for a collection of nine varieties is a sounder investment.

(*Continued on page 294*)

SO THAT EVERYONE MAY BUY

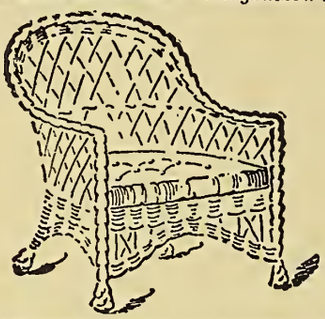
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It is made by sailmakers on the model we supplied for years to the U. S. Navy. It is made from duck that is 60 per cent. to 200 per cent. stronger than that in others, and sewn with thread that is twice as strong. It has sewing and bracing that no other maker has learned the need of. It is handsome, but severely plain—no showiness, just solid merit.

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Small silk name-label on every Rowe Hammock.

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and a hundred or more other ornamental styles and exclusive designs. For private grounds, public parks, city lots and suburban property. Gates and posts to match. Only highest quality—reasonable cost. Send for our 1911 Fence Pattern Book of

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You Need This "Detachable" Hose Reel

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It's the only reel that revolves on the faucet with the water flowing through the hose. It will keep your hose free from kinks or twists—make it last much longer. Can be attached and detached instantly.



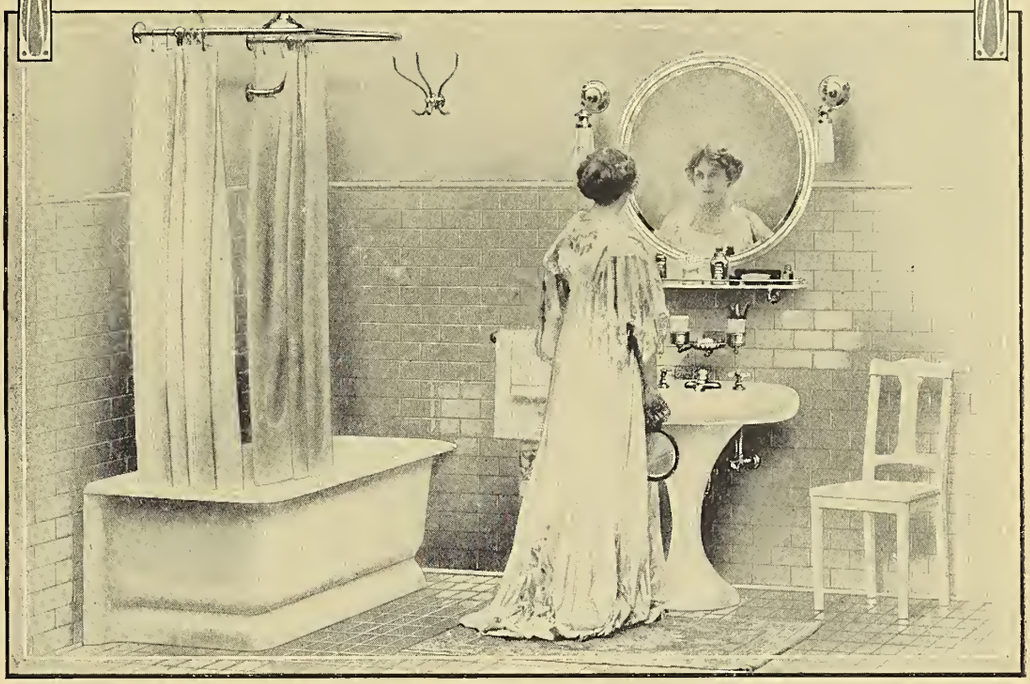
To attach, simply put the reel on the faucet, set the clamp, turn on the water and you can pull the hose off in any direction. To remove, wind up the hose with the reel on the faucet, loosen the clamp and lift it off.

The Hose is drained easily. Special faucet comes with each reel. You can get the Detachable Hose reel on trial. Ask your dealer for it or write us.

Send for a copy of "Useful Things for the Lawn." It fully describes the "Detachable" Hose Reel, the "Easy Emptying" Grass Catcher for Lawn Mowers and a number of other mighty valuable lawn articles.

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BECAUSE "Standard" Guaranteed Plumbing Fixtures possess every attribute of perfect sanitary equipment, they insure comfort and economy, and enhance a building's value. The "Standard" Bath illustrated above, tiles into the wall and floor, allowing absolutely no space for moisture or dirt. There is no occasion to clean under or back of it, and water splashed on the walls drains into the bath. This fixture is being rapidly adopted by those who appreciate the utmost beauty and refinement and the highest degree of sanitation.

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Send for a copy of our beautiful book "Modern Bathrooms." It will prove of invaluable assistance in the planning of your bathroom, kitchen or laundry. Many model rooms are illustrated costing from $78 to $600. This valuable book is sent for 6c. postage.

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The Beautiful New Hydrangea
ARBORESCENS GRANDIFLORA ALBA

SNOWBALL HYDRANGEA

This new Hydrangea with its enormous trusses of snow-white flowers, has proven a most valuable acquisition to our collection of flowering shrubs, being absolutely hardy, a profuse bloomer, coming into flower much earlier than the well-known Paniculata Grandiflora and continuing in bloom for several months.

After years of effort, we have now accumulated a large stock of three-year-old nursery-grown plants which carry from four to six strong branches and which, if planted during April, will give an abundance of bloom this season.

When sending your order, please state what time during April you wish us to make shipment.

3 Plants	$1.50
6 Plants	2.50
12 Plants	4.50

COTTAGE GARDENS CO., Inc. **Nurseries: QUEENS, NEW YORK.**



The many possibilities in grouping Japanese Maples may be appreciated by observing the distinctive result secured by this bed.

Rich Blood-Red Japanese Maples

Every one Meehan-grown—not one imported

Where bushy, vigorous Japanese Maples are wanted, with foliage of a richer, more intense scarlet, there are no finer plants than those now growing on our nurseries.

This present grand collection has been raised after over thirty years of experience in growing this particular class of stock.

In America we are the leading growers of Japanese Maples, and our stock is in great demand by nurserymen and dealers, as well as among property owners.

All experienced gardeners know the shortcomings of imported plants and how far superior are our freshly-dug, bushy, vigorous specimens. They are accustomed to the climatic conditions of this country, which cannot be said of stock raised in Japan.

This Spring our big collection is in fine condition for moving, and Spring, as you know, is the very best period in which to transplant Japanese Maples.

The largest plants we have are at least twelve years old, and all have been frequently transplanted, pruned and looked after.

Two years ago we sent some to England, and we have a note to the effect that they surpass any there in their rich coloring and general vigor.

Every property, however limited, has room for one, as they occupy little space, and many large properties can make showy displays by grouping them.

Here are the sizes. Place your order at once and we will guarantee you'll be pleased with the plants.

Blood-Red Japanese Maples

1½ to 2 feet—$1.25 each, 5 for $5.00, 25 for $20.00.

2 to 2½ feet, bushy—$1.75 each, 5 for $7.00, 25 for $31.25.

2½ to 3 feet, fine—$3.00 each, 5 for $12.00, 25 for $50.00.

3 to 3½ feet, 8 years old—$4.00 each, 5 for $16.00, 25 for $66.25.

3½ to 4 feet, beauties—$5.00 each, 5 for $20.00.

SUPERB SPECIMENS—4 to 5 feet—$6.00 to $10.00 each.

SPECIAL OFFER
Plant a Japanese Maple Group

Very few people know the decidedly beautiful effects possible in combining various varieties of Japanese Maples in a group.

The crimsons, greens and yellows always harmonize. Set a group out on your lawn and you'll be delighted with the effect.

Here is a fine selection for the purpose:

2 Japanese Blood-leaved Maples 2 to 2½ ft.
1 Golden-leaved Japanese Maple 1½ to 2 ft.
1 Green Polymorphum Maple 3 to 4 ft.
2 Red Fern-leaved Japanese Maples 1 to 1½ ft.
1 Green Fern-leaved Japanese Maple 1½ to 2 ft.
1 Ivy-leaved Japanese Maple 2 to 3 ft.

These 8 fine, well-developed specimens, from 1 to 4 feet high, for **$13.00**

Are You a Garden Owner?

If you are a garden owner, needing trees, evergreens, perennials and plants, SEND US 10 CENTS and we'll send you our 100-PAGE NEW SPRING PRICE-LIST, and mail you THREE BIG, INTERESTING COPIES of our GARDEN BULLETIN. These are worth triple the price.

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SECOND: This clean, convenient way of disposing of ashes and cellar refuse. Doing away with the ash barrel nuisance with its menace to health and its fire risk. Fireproof, sanitary. Top flush with floor. Easy to sweep into.

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12 WAGNER PARK ROSES $1

All strong, healthy, well-rooted plants, no two alike. All correctly labeled, true to name. With ordinary care will give a splendid lot of exquisite buds and flowers this year. Try this set. Order to-day.

FREE "Plants and Plans for Beautiful Surroundings" a book of invaluable information on Floriculture and Landscape-Gardening. Also lists the famous "Wagner" Roses, Shrubs, Trees, etc. Fully illustrated. It's FREE. Write for it now.

WAGNER PARK NURSERIES, Box 611, Sidney, Ohio
Florists--Nurserymen--Landscape-Gardeners

(*Continued from page 292*)

Another generally overlooked morning-glory is the Heavenly Blue (*I. rubra cærulea*), which has clusters of large blossoms of the purest azure. Unfortunately this, too, is apt to leave to chance the matter of coming true. I believe that it is really a variant of *I. rubra cærulea;* in any event, I have found twice there was altogether too much "rubra" mixed up with the "caerulea" to suit me. What has come true, however, has compensated fully for all my disappointments. The Brazilian morning-glory (*I. setosa*) suffers still more from neglect. It is the most luxuriant of all the family, a single plant covering an immense wall or trellis area. The light green foliage is set off by the reddish, hairy stems and the rose blossoms, with throat of a deeper shade, are extremely showy. A fourth morning-glory that is too seldom seen is the dainty little scarlet star ipomœa (*I. coccinea*); not to be confused with the cypress vine, which is *I. Quamoclit.* I gathered my seed by a roadside in the Bahamas, but some of the seedsmen carry it. For the best results it is unwise to plant seed of any of these morning-glories in the open ground; plant under glass one inch apart, and be sure to soak the hard seeds over night in a glass of warm water. Contrary to the usual idea, morning-glories are transplanted very easily.

And dahlias; ever think of them in the light of an annual? They may be treated as such nowadays, because there is plenty of good seed in the market that will produce abundant bloom the first season and at so little expense that the plants may be left to go the way of all annuals in the fall if it is too much trouble to store the tubers. Single dahlias, which are fine for cutting, will come into bloom about the first of July if the seed is sown under glass the middle of April. That is the better course, but seed sown in the open ground in May will give plenty of blossoms in September. Though the double and semi-double dahlias are less dependable, they are worth while if only for the possibility of one striking novelty in a package of seed. I saw some last summer that, with no more care than the average annual, produced beautiful semi-double flowers in only three months from seed. Try one of the good strains at about fifteen cents a package.

Scabiosa, or mourning bride, is a half-forgotten oldtimer that also deserves a place in this list of the slighted. Plant the rose, lavender, white and claret varieties, each by itself, and you will have something quite distinct in the way of garden beauty and one of the most satisfactory annuals for cutting.

Everyone who sees the gorgeous wallflowers of England's springtime wants to grow them here. They will stand the winter in some places north of Virginia, but the best way around the difficulty is to plant some seed of the "annual" kind—the

(*Continued on page 296*)

GOING to BUILD?
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If you can spare half an acre for a cherry orchard, here is the choicest, thriftiest selection of sweet and sour cherries—early, medium and late—you ever saw. All are first-class, two year old trees, ready to come into bearing in three years. Read the list. **SOUR: 5 Early Richmond, 10 Montmorency, 5 Late English Morello. SWEET: 2 Gov. Wood (White), 2 Green's Black Tartarian, 2 Napoleon Cherry Trees.**

The Green's direct-to-you Catalogue price of these trees is $4.20, but others would charge you much more—now for $3.48.

12 Best Plums only $2.35

This is one-third off our regular catalogue price—and the varieties I note them: *Abundance, Burbank, Gueii, Bradshaw*, one each; *Shropshire Damson, Lombard, York State, Niagara*, 2 each. Twelve trees—all largest best stock, and at this special price of $2.35.

There are many other Bargain collections of all kinds in our 1911 Catalogue—larger, finer, better than ever before. Send for it to-day to convince yourself. We have no agents. Write now and also ask for our souvenir book, "30 Years with Fruits and Flowers."

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FARR'S HARDY PLANT SPECIALTIES

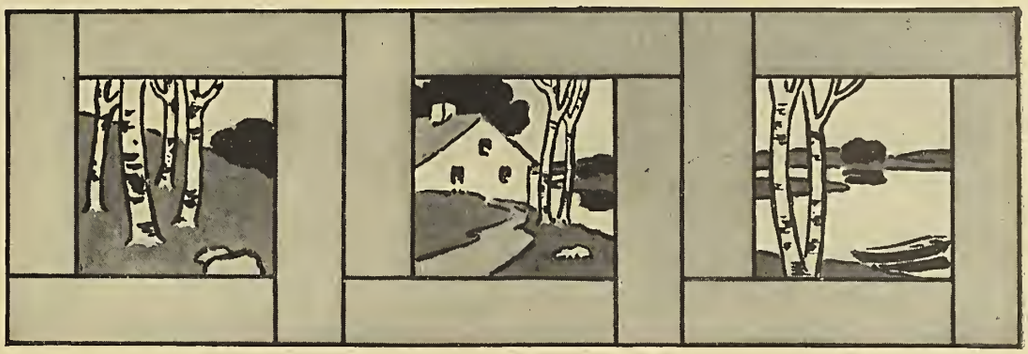
Besides the splendid collection of Irises and Peonies, there is described in this book an endless variety of those things specially adapted for Spring planting—Hardy Asters, Chrysanthemums, Anemones, Pyrethrums, Tritomas, etc. and a superb collection of Hardy Phloxes, comprising all the latest novelties.

Japan Irises are best planted in early Spring and my collection of upwards of 75 varieties is unique in one important particular—every one is absolutely true to description, which cannot be said of any collection imported direct from Japan—it has taken over ten years of persevering study to bring my collection to its present state.

I wish every reader of HOUSE & GARDEN who is interested in growing hardy plants might have this book, as it makes friends for me everywhere, and I would like to count *you* among them.

Bertrand H. Farr, WYOMISSING NURSERY. 643F Penn St., Reading, Pa.





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There are a number of places in that new home you are planning where tiles can be used to better advantage than any other material. There are at least four places where tiles are essential: the fireplace, the porch floor, the bathroom floor and walls and the walls and floors of the kitchen and laundry.

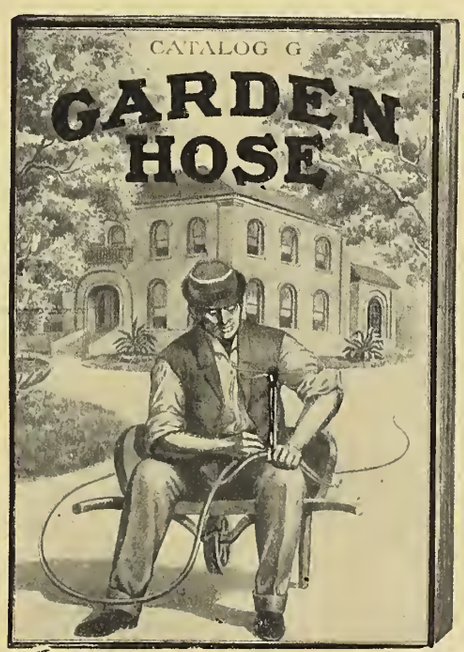
We have prepared four booklets:

"Tiles for Fireplaces"
"Tiles on the Porch Floor"
"Tile for the Bathroom"
"Tiles for the Kitchen and Laundry"

which we send free to home builders. You would do well to read them before perfecting your plans.

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IRON AND WIRE FENCES

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ENTERPRISE FOUNDRY AND FENCE COMPANY **1219 East 24th Street, Indianapolis, Ind.**

(*Continued from page* 294)

Paris Early—each year. If it is sown under glass in April there will be abundant summer and autumn bloom.

The common zinnia is a very trying individual in the garden excepting in a few really fine shades. Much more amiable is the dwarf Mexican zinnia (*Z. Haageana fl. pl.*), which furnishes such a good note of yellow without taking up much room that it ought to be used widely. I am inclined to think that this zinnia is offered under more than one name. It is distinct, however, from the ordinary dwarf zinnia.

Neither *Thunbergia alata* nor maurandia finds its way into the northern garden very often; both are seen less than once was the case. They should be brought out of their neglect, being invaluable for light vines that do not run up above six or eight feet. The Thunbergia comes in white and two shades of yellow, and the maurandia in white, blue, rose and lavender. In the South they are classed as perennials, but here they may be treated as annuals, sowing the seed under glass. With me the maurandia stands a good bit of frost.

These are by no means all of the rarely invited; but they are numerous enough to emphasize the fact that there are a goodly number of easy, as well as beautiful, annuals that, through no fault of their own, are comparatively unfamiliar garden names.

A Fast Growing Vine

WHILE waiting for honeysuckle and wisteria to decide whether they would or they wouldn't, we sowed a few seeds of wild cucumber to produce a covering over an ugly house-angle and a long stretch of siding, and since then have not felt bound to the stereotyped climbers. The vine is known as *Echinocystis Lobata*. It is grateful for a helpful netting or a bit of string, but these lacking, the thousands of wiry tendrils will attach themselves alertly to anything clingable, even the most unresponsive splinter. Late in August countless dainty blossoms come; these are like the white lilac, but more feathery, and give forth, especially after sundown, a heavy honied odor. The effect of the vine over a wall or pergola in the moonlight is exquisite.

The seed pods form in September, and are exactly like a round cucumber, whence comes the name. The seeds, ripening in October, will, if allowed to drop, sprout next spring; and the vine will be well toward the eaves by the time the regular April sown seeds are waking up. This can be done by hand, too, and by sowing lightly, and warmly covering seeds any time in the fall while the ground is open, they will send up two large leaves just after the frost goes when it would seem much too early for any green things to be abroad. The wild cucumber has but one fault—and we have given it many tests, using it as a canopy over too sunny chicken and duck

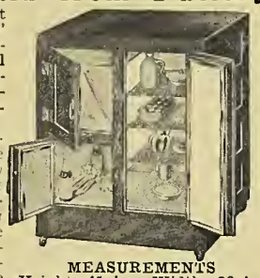
(*Continued on page* 298)

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Depth, 21 in. Ice Capacity, 100 lbs.

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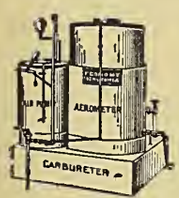
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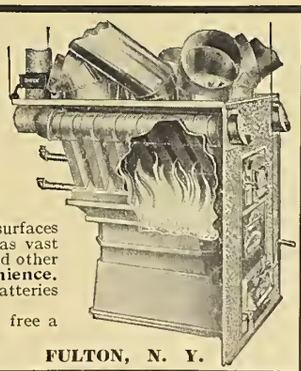
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MANUFACTURERS
32 Canal Street - - Boston, Mass.





(*Continued from page 296*)

runs, or covering old stumps, outbuildings and fences—it *will* lose its lower leaves exposing straggling stems for three feet above the roots, but to cover this defect we plant well-started climbing nasturtiums in May, which soon form a mass of green, with bright blossoms, near the ground. Another pretty effect results from the sowing of morning glories, which rival the wild cucumber in rapid growth, the brilliant cup blossoms blending well with the light green foliage of the sturdier and more densely leafed vine.



With the assistance of wire netting the cucumber vine climbs rapidly.

M. H. O'C.

Four Months of Strawberries

EVERY one who grows strawberries has regretted the shortness of the season during which this most luscious fruit ripens. Three weeks are about the limit of produce of any ordinary sort, though by planting early and late varieties one can extend it to four weeks. But it looks now as if we would soon be able to extend the season to four months through the introduction of a new type of plant which produces blossoms throughout the summer.

A few years ago a variety of strawberries called the Pan American was introduced to the trade. It was claimed to bear fruit throughout the summer and early autumn. The horticultural public was of course sceptical at first, but here and there a dealer tried it and was delighted to find the claims borne out by the actions of the plant. So the plants were generally offered and other people bought them. Certain seedlings of this Pan American were also introduced, notably two sorts called America and Francis and these also proved productive through a long period.

These strawberries have established their claims so well that fruit growers in Western New York were selling the fruit in the fall of 1910 in considerable quantity. The berries found a ready market at twenty-five cents a quart. Plants of these varieties are now so widely known and disseminated that they can be obtained from many of the larger dealers in fruit trees and vines.

C. M. W.



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will protect concrete construction of all kinds against the ravages of dampness and at the same time will not conceal the distinctive texture of concrete or stucco. It is admirable for residences, mills or such heavy construction as subways, bridges or dams. It comes in white and different tints.

It will not chip or flake off, but becomes a part of the material itself, adding to its durability and its beauty. When applied overhead it will not drop and injure delicate machinery.

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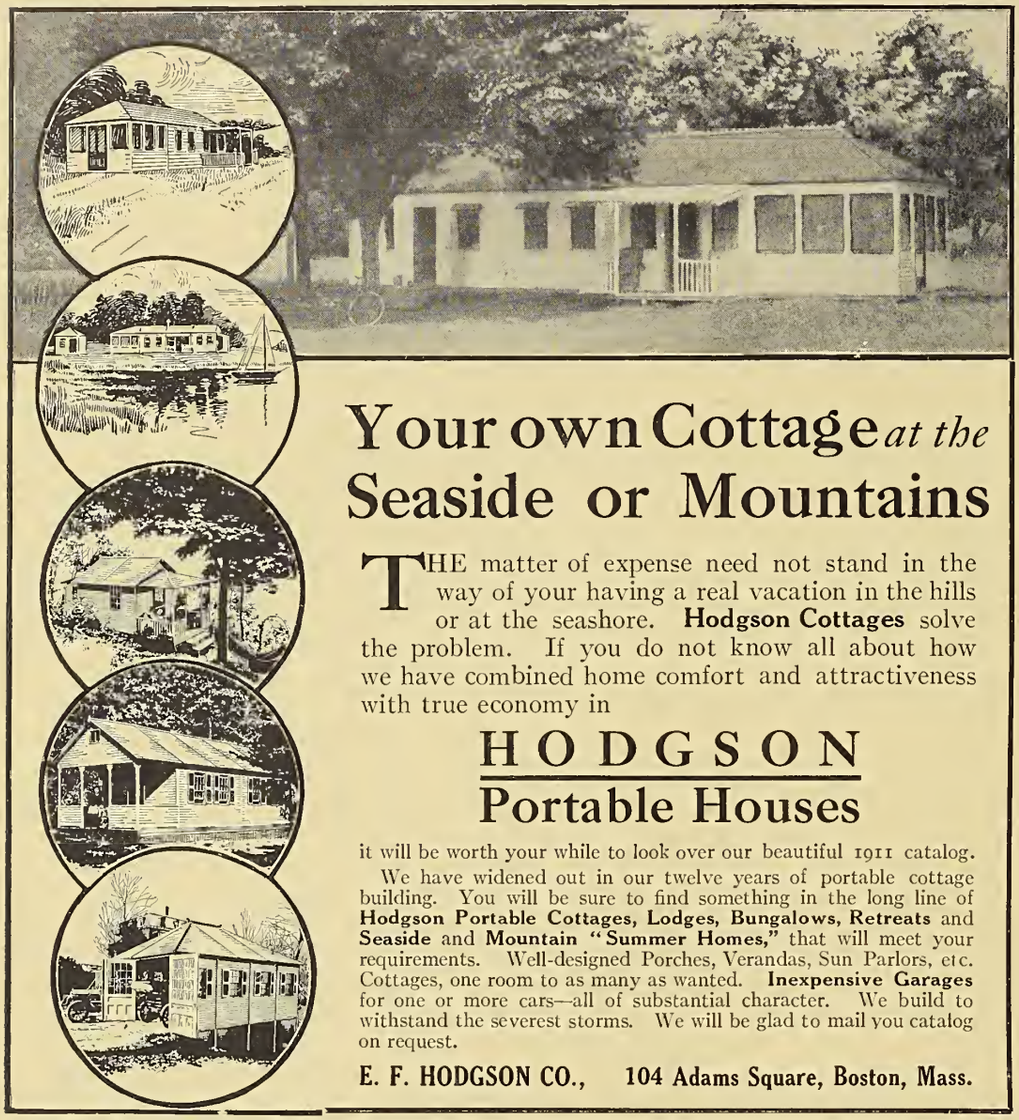
In the planning of country grounds of this type, the designing of a proper gateway and fencing can make for or destroy the general scheme. Here the individuality of the architect is exercised in designing a fencing to harmonize with the appointments of house and grounds.

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This free book tells how to make and maintain a beautiful, thick, even-growing lawn. It explains the right kind of soil, how to drain it, how to prepare the seed-bed, how to keep down weeds, how to kill ants and ground moles, and covers many other important points that must be known in order to make a good lawn.



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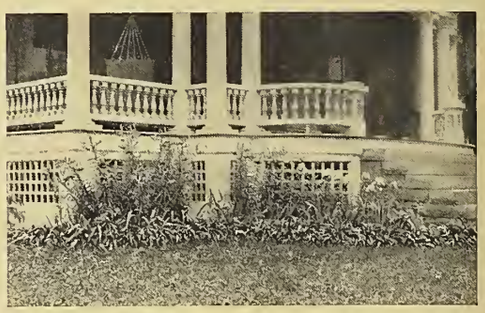
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A Self-Maintaining Border

IT is not always a matter of expense but rather the care required that prevents the planting of flowers. Especially is this true with people of means who spend their summers out of town, at lake or sea shore. They want as little trouble with the hired man as possible. To meet just such a condition the following perennial border was designed. It is located at the base of a large porch, the white woodwork of which forms a background for the flowers. Naturally, only hardy, vigorous growing perennials that could fend with weeds



A border which is attractive and keeps a sequence of bloom through the summer

were selected. The border conforms in a general way to the outlines of the porch. along the edge of the grass there is a dense row of funkias or plaintain lilies, back of which a row of German iris brings the border higher. In one angle of the porch tiger lilies overtop the iris and bring their flowers to a level with the floor of the porch. To the right of these phlox takes up the color, and when the lilies are almost gone it carries brilliance far into fall. To the east larkspur hold their blue spikes against the white woodwork, which at the base of the stone steps lobelias have been tried out and found wanting, so gaillardias were substituted. At the angle of the porch with the house, a clump of golden glow has been placed.

In this border there has been but one end in view, hardiness and self-maintenance and that has been achieved without any undue color clash and with a fair succession of bloom. The border faces northeast, yet a covering of leaves is all the protection required in winter

C. L. M.

What My Garden Means to Me

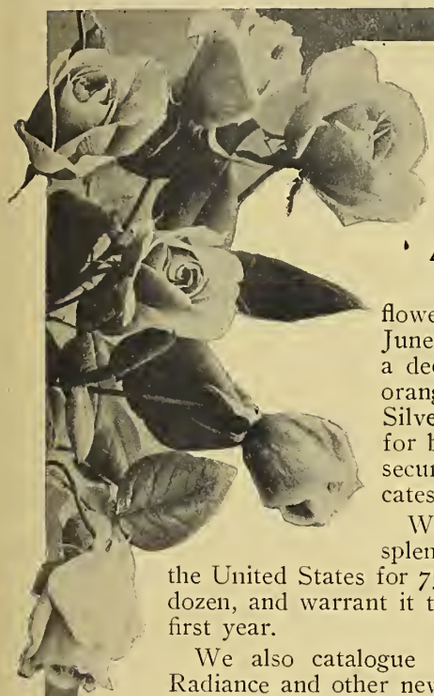
(*Continued from page* 240)

past; it runs:

A weary traveller was passing along and noticed in his path a dry, shriveled leaf. Picking it up he was amazed at the perfume it exhaled. "Oh! thou poor withered leaf, whence comest this exquisite perfume?"

The leaf replied:

"I have lain for a time in the company of a rose."



Lady Hillingdon

A Splendid, New Outdoor Rose

flowering profusely from June until frost. Color is a deep bronze yellow with orange shadings. Won the Silver Cup at Morristown for best new Rose and has secured many other certificates.

We will deliver this splendid Rose anywhere in the United States for 75c. per plant, $7.50 per dozen, and warrant it to flower profusely the first year.

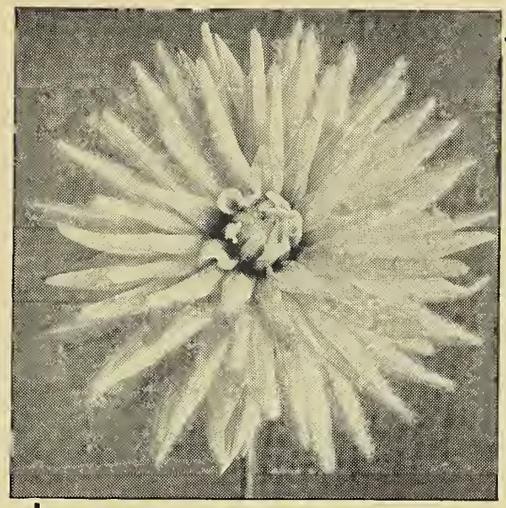
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First, The Biltmore Nursery Books—which help you to plan your planting, to select the plants. *Second*, the manner in which the plants are shipped from Biltmore Nursery to you, by mail, express or freight. *Third*, the select strains of Biltmore Nursery plants which result in beauty and utility in after years.

When the early days of Spring remind you of the planting you had planned to do, but for which you have ordered no plants, let Biltmore Nursery help you. Don't put off the planting until another season—it will be just as much trouble then as now, and you'll have to wait just that much longer for the full beauty of the trees and shrubs.

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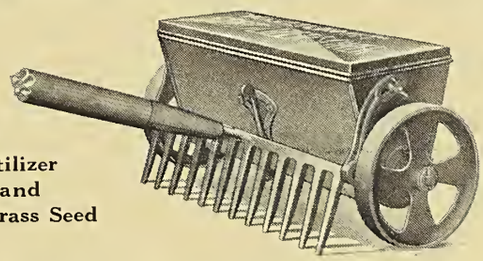
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Sows Fertilizer and Grass Seed

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It is foolish to sod, because a *better lawn* can be had by sowing pure bred grass seed at one-tenth the expense. Cost of the machine included. "Velvetlawn" Fertilizer and Grass Seed Sowers have proven their worth by the work they have done—by the money they have saved. It is even more necessary than a good lawn mower. The grade of a newly-made lawn can be maintained and the proper amount of seed worked into the soil at the same time. *Invaluable in the maintainance of old lawns*, because the cultivator teeth work up the soil and new seed is being sown at the same time.

ABSOLUTELY GUARANTEED to do all we claim for them, or money refunded without fuss.

Price only $6.00 *f. o. b. Springfield, Ohio.*

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WILLOWCRAFT



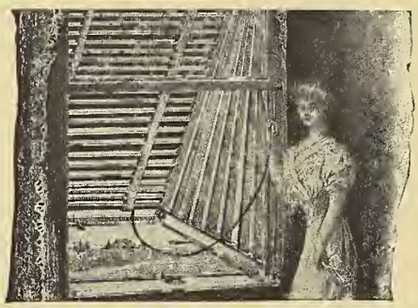
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For town and country houses. Very durable and artistic. Easily operated from inside. Admit air; exclude sun rays.

Special Outside Venetians



for porches and piazzas; exclude the sun; admit the breeze. Virtually make an outdoor room.

Orders should be placed now for early summer.

Write for Venetian Catalogue No. 3.

Also Inside Venetians, Rolling Partitions, Rolling Steel Shutters, Burglar and Fireproof Steel Curtains, Wood Block Floors.

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If you contemplate fence building, the artistic styles and useful information in our new catalogue 10 will interest you.

Write for it today, stating briefly your requirements.

We should like to tell you things that you ought to know about fences, plain and ornamental; it will, therefore, pay you to write us before constructing a fence of any kind.

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HICK'S BUFF PLYMOUTH ROCKS OR BUFF WYANDOTTES

will ornament your premises and will supply your Family needs of Eggs and Meat for the table. None better.

If you wish to please the Children, order some of my Buff Cochin Bantam eggs for setting purposes, the greatest of Chidren's pets.

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GARDEN



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J. F. NOLL, 110 Mulberry Street, NEWARK, N. J.

Plant for Immediate Effect

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Start with the largest stock that can be secured. It takes **over twenty years** to grow such Trees and Shrubs as we offer.

We do the long waiting---thus enabling you to secure Trees and Shrubs that give an immediate effect. **Price List Now Ready.**

ANDORRA NURSERIES Box H. CHESTNUT HILL, PHILADELPHIA, PA.

WM. WARNER HARPER, Proprietor

About Sweet Peas

THERE is hardly a man or a woman but thinks he or she is perfectly qualified to grow sweet peas, and should there not be a good showing, they never for a moment attach any blame to themselves, but point to the season, the birds, mice, and all kinds of creeping things, both above and below the soil, as being the cause of the failure; and so failure succeeds failure. As a matter of fact it is not everyone that can grow these lovely flowers.

They do best in a fairly loamy or light soil, and I recommend that not one, but various colors, should be sown at the same time, as the result is distinctively more pleasing to the eye. I am, of course, thinking more of the man who has but a small garden, for in the gardens of professionals and "big men" it is becoming more common to keep the colors distinctive.

At any rate the ground should be in fine tilth before sowing, and a little should be raked off the top, when the seeds may be put in to a depth of an eighth to a quarter of an inch, the soil being again gently spread over the top, and the whole patted down, though not too hard. Another thing to remember is not to plant sweet peas in the same ground more than two years in succession. It may be done oftener, but it is not good practice, and disappointment has been experienced from such experiments. Moreover, if there are any insect pests in the ground, they will make havoc with the rootlets, and even the tops of the peas as they show out of the ground.

Sweet peas may be sown as soon as the ground can be worked up fine enough, and continue sowing till middle of May.

Where there are sparrows, it is well before the sprouting above the ground, to place some strands of cotton from one end to the other of the rows of seeds. Black cotton is preferable to white, as the sparrows seem to fear it more. It is also well to put the pea sticks or other arrangements which may be adopted for training the plants, up in time; and if a reasonable amount of water is supplied in a dry season, there should be a good amount of bloom, provided good seed has been obtained, and the soil kept loose on top.

W. R. G.

Cross Fertilization

THIS is an extremely interesting phase of the cultivation of this lovely flower and one whereby the grower may by care and perseverance produce something new. To those who have not looked into the structure of the pea flower, it is a little puzzling at first, as they are self-fertilized before they expand. However, we must select the flowers we are to operate upon as soon as they show their color in the bud, cut away the sepals and petals and remove the stamens; this will ensure their not being fertilized with their own pollen; then gather from the variety which we wish to cross with, some good dry pollen, carry this on a camels hair brush

(*Continued on page* 304)



An Indispensable Book for every Garden-Maker

The Garden Primer

By Grace Tabor and Gardner Teall

¶ The Garden Primer, as its title indicates, is a hand-book of practical gardening information for the beginner, covering every branch of the subject, from preparing the soil to the gathering of the fruit and flowers. In it is set forth, without any confusing technicalities, just the information that will enable the amateur to grasp quickly the essentials of garden-making. The authors, in preparing this book, have drawn from their long experience, and in writing it assume on the part of the reader no knowledge of the subject, in order that it may be of the greatest value to the beginner. There has been great need of a book of this kind, yet, so far as we know, no volume has ever been published that treats the subject in this charmingly simple way. While dealing with first principles this volume has an equal interest for the advanced gardner, who will find much of value in the experiences of the authors, and in a fresh presentation of a subject which always abounds in new methods and discoveries.

¶ Every branch of gardening is treated in a delightfully practical way—the growing of vegetables and flowers, the use of fertilizers, pruning, cultivating, spraying and the thousand-and-one things that every successful garden-maker needs to know. A profusion of illustrations, many of them of the most practical sort in explaining the various garden operations, make the text especially clear.

¶ The matter is supplemented by carefully prepared planting tables, an invaluable guide to the beginner in gardening.

The Garden Primer is a beautiful 12mo volume with many half-tone illustrations. Bound in dark green cloth, tastefully decorated. $1. net; postage 6c.

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Publishers
449 Fourth Avenue, New York

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No Noise But The Swish of The Blades

While others give you lines of talk, we give you lines of grace and beauty combined with strength and quality.

No Fault But That of Lasting Too Long

Its merits adequately told in our beautiful catalogue. Yours upon request.

S. P. TOWNSEND & COMPANY
15 Central Avenue, Orange, N. J.



BUNGALOWS *By Henry H. Saylor*

HERE at last is a book that covers in the most practical and comprehensive way the whole subject of bungalow building and furnishing, with a profusion of pictures of successful bungalows and their interior arrangements. The author, an architect himself, points out the advantages of the bungalow type of house, shows how it originated, and how it has been applied to fit American needs. The matters of planning and building materials are thoroughly covered; the subject of interior finish is also taken up, together with schemes for furnishing that are in harmony with the informal and comfortable character of the building. The fireplace, too, always an important feature, is thoroughly discussed, as well as such essential features in the completion of a successful bungalow as water supply and drainage.

The pictures and plans in which the book abounds are of the various types of bungalows—those adapted for all-the-year-around occupancy, for summer homes, mountain camps, and the seashore. The many superb pictures forming the illustrative features are of bungalows that have actually been built, and are the work of leading architects in various parts of the country. They have been carefully selected, so as to prove of the greatest value to the prospective builder of this fascinating type of moderate-priced house.

BUNGALOWS is the first adequate book on the subject that has been done.

Brown buckram binding; cover design by George Hood.
Large octavo volume. Price $1.50 net; postage 20c.

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Tuthill Cut Glass

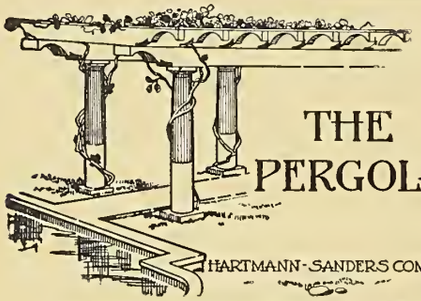
THE dull, deeply-sunken intaglio portions of Tuthill designs present strong contrast to the scintillating brilliance of the polished surfaces and the jewel-like facet cuttings.

Write for the Connoisseur Book.

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STROKUM
Stops Caterpillars

Don't make the mistake of waiting until the caterpillars begin to crawl before you protect your trees. Band them with Strokum now. They can't crawl under it—they won't crawl over. Easy to apply. Is not unsightly. Guaranteed not to injure your trees. One banding lasts entire season. Easy to remove. Leaves no disfiguring evidences. Use it this month. Next may be too late. Send for booklet.

SPECIAL OFFER

Mail us $2.00 and we will send you, express paid, enough Strokum to band ten trees, averaging 1 foot in diameter. West of Mississippi, 50c extra.

Stratford Oakum Company,
166 Cornelison Ave.,
JERSEY CITY, N. J.

(*Continued from page* 302)

and brush lightly over the stigma, reverse the crosses and carefully mark and label each cross. After the seed has formed, and the outside of the pod has turned yellow, gather them and spread out in some dry airy place to ripen; and when they are real hard, store in a cool place till sowing time. Do not get discouraged if you do not get something wonderful at first; the general tendency will be retrograde, but watch keenly for some mark of distinctiveness, either in color, form or time of flowering. Having gained the desired point of improvement proceed to try to fix it by destroying for several years all those that do not come up to standard.

SWEET PEA POINTERS

The best time for picking is the early morning.

The worst time for picking is in the full sunshine.

Deep cultivated soil is one of the foundation stones of success.

Early sowing is another.

Keeping all the flowers picked and not letting seeds form is essential.

Don't grow too many, but grow them well.

Don't be afraid of a little shade; they are better for it in our hottest weather. If you want to exhibit Henry Eckford and some others at their best you must shade.

E. J.

The New York Suburbs Supplement.

(*Continued from page* 315)

New Rochelle, which is the first city north of the New York City Line in Westchester County, is to a large extent composed of residential parks, there being about thirty-five such communities within the city limits, all of them of a high class. New Rochelle is, strictly speaking, a residential and suburban city, and a very large percentage of its residents are in business in New York City

At Larchmont there is an attractive little business center a few blocks east of the station, and the center of population is still further east, in what is known as Larchmont Manor, an old substantial development of very high class which lies directly on the shore. For a considerable distance along the waterfront a beautiful strip of country has been preserved as a park. Within the Manor there is what is called Horse Shoe Harbor, a small bay within which is an excellent beach, and here the residents have built a club-house for their own use.

Mamaroneck is one of the old villages, its business section being far more widely scattered. The type of development surrounding Mamaroneck is more in the shape of large estates, although there are a few small developments of lots and plots. Some of them near the water, others some two or three miles inland.

Immediately surrounding what is now called Rye Beach Park on the waterfront

(*Continued on page* 306)

Is it here

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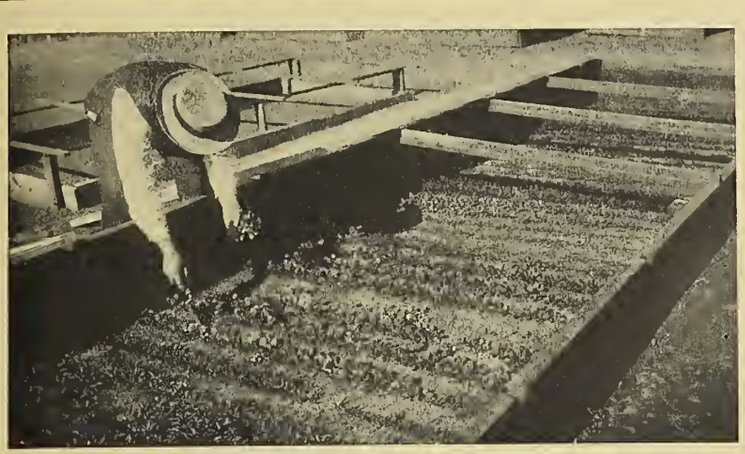
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(*Continued from page* 304)

there are a few restricted developments offering bungalow sites and building plots of a very unique character. Rye Beach is connected with Mamaroneck, New Rochelle and Sea Cliff, Long Island, by ferryboat. Milton Point, which lies south of the village of Rye, is famous for its beautiful residences, which are to a large extent occupied by some of the older and better known families of Westchester County. At the extreme point is the American Yacht Club.

Port Chester is to a considerable extent a manufacturing village, and the business section has a very bustling and thriving appearance. The surrounding country is more rugged and far more rolling naturally than that of the more southerly coast country, offering a greater variety of home sites. There are very few developments near Port Chester, the country being largely taken up by large estates.

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New Jersey, too, offers the shore-loving citizen attractive house sites. Her coast resorts are especially well known to New Yorkers, but more as a place to spend the vacation period than as a possibility for commuters. However, if we take a maximum of one hour and a half as the limit of distance by train that one can commute comfortably, there are a number of places that can be reached. Probably the nearest of places within the suburban limits that one can find abundant opportunity for salt-water bathing, sailing, fishing and motor-boating to his heart's content, is Greenville, N. J., 4.2 miles from New York on the line of the New Jersey Central, and Bayonne, a mile further. Greenville is really a part of the municipality of Jersey City. It is less than half an hour from the business district of New York.

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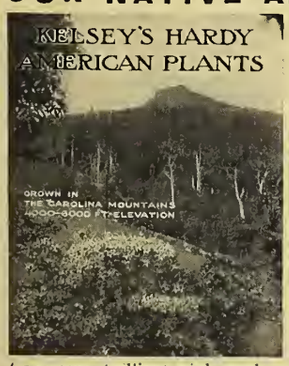
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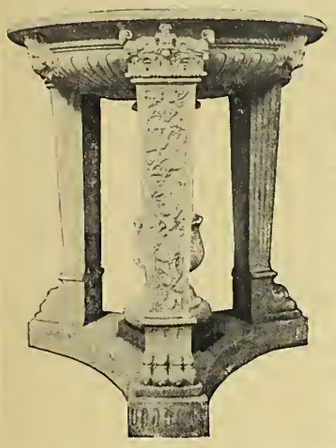
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The New York Suburbs Supplement

THE VARIETY OF SECTIONS—WHAT THE COMMUTER MAY FIND NEAR NEW YORK—THE CHOICE BETWEEN HOMES ON THE PLAIN, IN THE HILLS OR AT THE SALT WATER

WITHIN the last few years the call of the country has drawn thousands from the confinement of city life, many to emigrate to the wide lands of the open country, many to the smaller farms of New York and New England, but the majority to the outlying districts of the big cities. Although this movement—for it is of sufficient strength and concerted action to be so termed—is characteristic of the whole country, it is very noticeable in New York, and New York may well be used as the illustration of this renaissance of desire for a more wholesome and more rational mode of life.

The desire to own a real house, so strong in all men, is certainly increased as the home life decreases. The phenomenal growth of apartments and apartment hotels may satisfy those who are weary of domestic duties, but there comes a time when the old independence feeling is again aroused, and the country is then turned to as the logical place to afford relief. The ties of business in the city limit the choice of most, but only in a degree, for under the present development of the suburban railroad service there is a great variety for the New Yorker to choose from.

Granted the wish for a country dwelling, the next thought is where, and like the good fairy in the tales, the adjacent lands stands ready to please any preference. If the prospective emigrant seeks the seashore or the sound, the mountains or hills, the rivers or lakes, the level country, or even combinations of these features, he has but to name his wish, and near at hand he may find its gratification.

With so much to choose from let us make three arbitrary divisions of level, mountainous and shore country, and briefly sketch what may be had within commuting distance of Greater New York, first considering those sections whose features are neither rocky or high enough to be termed mountainous, or which do not border upon the seashore. Northern New Jersey offers us land of this character in the stretch from Jersey City to Somerville.

Along the Central Railroad of New Jersey, but fifteen miles from New York, is the picturesque town of Roselle. The broad, well-shaded streets give one the impression of neat New England. Here the homes are unpretentious, but attractive, and all well kept. The public service conveniences are of the best, as is the case with all the towns in this section. Another attractive place is Aldene, just beyond which lies Cranford. The natural beauty of Cranford is still further enhanced by the Rahway River, which runs through the main part of the residential section. There are many very beautiful and artistic houses, whose inhabitants enjoy the pleasures of boating and canoeing, and golf on the Cranford links. The schools along this line are all of modern construction, and



The broad streets of Roselle, with their arching elms are reminiscent of New England



An interesting type of half-timber house in Cranford. Hollingsworth & Bragdon, architects.



One of New Jersey's historic roads. The Rumson Road dates from Revolutionary times

provide capable instructors. A mile further on comes Garwood, smaller in size and less pretentious, beyond which is Westfield. Here the land values are somewhat higher, and most of the homes constructed by their occupants. This suburb boasts of five large public schools besides several private kindergartens. Near by is the beautiful Echo Lake, which supplements the Westfield Country Club in giving opportunities for outdoor exercise. Beyond, the smaller towns of Fanwood and Scotch Plains act as the more modest suburbs of Plainfield, until Netherwood is reached. This is entirely a residential offshoot of Plainfield, and contains many beautiful residences. A few miles beyond Plainfield is rapidly-growing Dunellen, where a fine new sewage system is being installed. The Watchung Mountains come nearer to the towns here and give more diversified scenery. About 31 miles from New York is Bound Brook. Here one finds more of a business section and less reliance upon the city than is the case with the afore-mentioned places. There are many interesting homes here, some of them of Revolutionary origin, for Bound Brook can boast of an early foundation and long history. Scenery at this point begins to approach the characteristics of the mountain sections, and from the Watchung Mountains, back of the town, there is a fine view to be had over the surrounding country. The hamlet of Finderne lies between Somerville and Bound Brook. Somerville is the county seat of Somerset County, and has a thriving business section, besides streets of attractive residences. A feature of note is the Duke estate, lying just beyond, which is kept open as a park for visitors.

Turning from this section, one finds somewhat similar features along the train line of the Erie, which to Suffern (32 miles from New York) traverses a farming country where there are many opportunities for the commuter to purchase acreage tracts, and either to remodel an old farm house to suit his needs or to build a new house.

Along this line the commuting traffic is very great, and the principal commuting centres are Rutherford, Carlton Hill, Passaic, Paterson, Hawthorne, Ferndale, Glen Rock, Ridgewood, Hohokus, Waldick, Allendale, Ramsey and Mawah. While nearly all of these places are cities or large towns, there is a large territory contiguous to them which still offers splendid opportunities for the commuter who wants a garden, to purchase or rent a home very reasonably. There is much beautiful scenery, and the land has advantages of being by brook and stream, or shaded by woods.

C. H. MILLER



At Bound Brook the scenery takes on the characteristics of the mountain sections. Chimney Rock Falls in the Watchung hills

The House in the Hills

IF the level plain and well-tended rolling lands stretch uninteresting before you, and the neat lawn and regularly set trees are a bore, perhaps the informality of the mountains will please you. In them you can hide your bungalow within some glen or perch high on some mountain summit to overlook all the land. Perhaps you think that such wishes can never be gratified near



Echo Lake, near Westfield, gives opportunity for water sports, unusual in inland sections near the city



The English rivers present no more beautiful panorama than the Raritan River and Canal, near Somerville

New York, and your longed-for mountain or hilltop home must wait until such time as you are independently wealthy. I can show you that your ideal landscape lies just beyond the city's doorsill, either in New Jersey, in Westchester County, New York, or along either bank of the Hudson.

Take Westchester, for instance. The lower part of the county is divided almost exactly in half by the Bronx River, which runs past Mount Vernon, Bronxville, Scarsdale and White Plains. On either side of this river there are high hills, offering most attractive building sites. Probably Bronxville and Scarsdale represent the highest type of small acreage or large plot developments to be found anywhere in the suburban section.



From the mountain top at Oakland, N. J. This suburbanite overlooks a whole countryside

At Bronxville, we find Lawrence Park, which was put on the market several years ago, and has experienced a steady growth because of the high class of people who have made it their residence. A large number of New Yorkers make the Hotel Gramatan here their summer home. The surroundings of the Bronxville station are particularly attractive, in as much as nearly all of the buildings have been erected under the supervision of the same interests that promoted Lawrence Park. The houses are all of good architecture and evidence a distinctiveness and good taste. There are other attractive developments through the surrounding country which are experiencing an excellent and healthy growth. Valuations range from $400 upward in the smaller developments, for lots 25 x 100, while acreage will average from $2,500 to $5,000. Acreage in the more desirable section will bring $10,000, depending largely upon the natural advantages and distance from the station, and where all of the public utilities have been installed. One-quarter acre plots in "Lawrence Park West" sell for $4,000.

At Scarsdale the station is surrounded by a park of several acres, which was donated by one of the local real estate development companies, and is maintained as a park by them. There is no business community at Scarsdale, all household necessities being supplied from surrounding towns by delivery wagons.

Between Scarsdale and Bronxville there are several developments of the less expensive type, where lots may be bought from $350 to $500, or $600 apiece. Acreage in Scarsdale and the surrounding country will average from $2,000 to $5,000, depending upon its location and distance from transportation facilities; houses from $7,000 to $20,000.

White Plains, nearby, a particularly thrifty village, and in fact, the largest village in the State of New York, is built up almost entirely of separate frame houses, and in the newer sections they are of extremely attractive architecture. White Plains is the county seat and the business centre of Westchester County and has many features of great interest.

Nearly three-quarters of Westchester County lies north of White Plains, and with the exception of the villages along the Hudson River there are very few large communities. At Pleasantville, Mt. Kisco and Katonah, on the Harlem Division, we find three extremely attractive and thriving villages, and surrounding these, for many miles, there are a large number of beautiful estates and farms owned by New York City business men, who are daily commuters. Of less mountainous characteristics is the section along the Hudson. The land is hilly, however, and much of it is high above the river. From Yonkers to Peekskill, the eastern bank of the Hudson River runs nearly north and south, and the country is of almost the same character throughout its distance.

Yonkers is a large manufacturing centre, having a population of some 80,000 people. In the outskirts of the city there are some very high-



A typical mountain home among the cedars for which Caldwell, N. J., is famous



A stucco house on Park Street, Montclair, showing a strong English inspiration



The broad lawns at Essex Falls make a fit setting for such homes as these

class residential sections, such as Park Hill and South Yonkers. The banks of the river are very precipitous, being one continuous range of hills reaching an altitude on an average of 450 feet at a distance of something less than a mile from the water. The crests of these ridges are largely taken up by great estates of wealthy New York people, among them being Samuel Untermeyer, John D. Rockefeller, William Rockefellow, Miss Helen Gould, Edwin Gould and other large property owners. At Hastings-on-Hudson, Dobbs Ferry, Irvington, Tarrytown, Ossining and Peekskill there are villages of very much the same type, varying only in population. They all lie close to the river, and are built on precipitous banks, each street lying far above the one next to it, giving each of these villages an attractive and unique appearance from the river. There are a number of developments along this country offering magnificent building sites, with splendid views of the river and at reasonable prices. Conspicuous among these is River View Manor, at Hastings, where there is an extremely high-class community of about one hundred homes, where all of the public utilities have been installed. Here lots may be bought from about $500 upward, depending on natural attractiveness.



A distinctive house in the Scarsdale estates, which shows another type of the popular gambrel roof

There is a magnificent driveway running along the crest of the first ridge above the river, known as Broadway, which for years has been the most popular thoroughfare between New York and Albany. A large percentage of wealthy people who make their home in this section travel backward and forward to the city by automobile rather than by the trains.

In contrast to the large towns on the east bank of the Hudson the west bank has settlements which for the most part rely almost entirely on New York for business, and are limited chiefly to home sites. Some of these towns are in New York, while others are on the Jersey side of the boundary. The Northern Railroad of New Jersey parallels the Hudon River as far as Nyack, 29 miles from New York. The best trains to Nyack take but little over an hour, and the country traversed is the top of the Palisades. All along this road there are rapidly-growing suburban towns with real country right up to their boundaries — Homestead, Babbitt, Fairview, Ridgefield, Morsemere, Palisades Park, Leonia, Nordoff, Englewood, Highwood, Tenafly, Cresskill, Demarest and Norwood are good examples. The Hudson River is near at hand and gives an excellent opportunity for motor boating and canoeing.

Farther inland in New Jersey there are various hill sections to appeal to the lovers of this type of scenery. Along the line of the Lackawanna, in Morris, Passaic and Somerset Counties, the prospective home-owner who wants real country and elevation, and who still desires to be within the commuting zone of New York with a maximum of an hour and fifteen minutes' travel, and not over thirty-five or forty miles distance will find his greatest opportunity. This road has two distinct lines running from Hoboken, with connection with New York by three ferries and by the Hudson and Manhattan tubes. The main line goes into Paterson and Boonton, and the Morris and Essex Division via Newark, the Oranges and Morristown. The junction is at Denville, which is in the heart of the mountain, lake and river section. At Summit the Passaic and Delaware branch runs to Gillette, Stirling, Millington, Lyons, Basking Ridge and Bernardsville. This last-mentioned place has a colony of millionaires, and its property values have therefore increased to a point that places it out of the reach of people of ordinary means. But at any of the above-mentioned stations between Summit and Bernardsville, there are splendid



A good example of the Southern Colonial architecture in Summit



At Nyack, stone construction covered with vines seems most appropriate to the location.



Hillside Avenue, Glenridge, is justly noted for its beautiful shade trees and well kept homes



The great pleasure of a home in the hills is the wide stretch of open country that lies before one



G. B. Schley's house in Fox Hills seems to have just the right lines for a mountain home

opportunities to secure acreage tracts, farms, old houses, and so on. The country is rolling and well watered. The principal stream is the Passaic River. On the main line, the Lackawanna and the Erie run practically parallel as far as Paterson, and very little opportunity is offered up to this point for the commuting homeseeker of the type we have in mind. Beyond Paterson, however, very little development has been done, and the country is mountainous and extremely picturesque. Some of the mountains attain an elevation of 1,200 feet above sea level. Here is a virgin country that in a very few years will be taken up and settled. It offers at present a wonderful opportunity for the homeseeker who wishes to answer the call "back to the land," but who is not unmindful of the fact that a good position in bank, counting-house or office in New York is far more lucrative than an attempt at farming. In other words, this section is almost ideal for the man who wants to live in the country and still do business in New York. A bungalow community has recently been started at Towaco, and the preliminary steps which ultimately will be land booms, have begun at other stations along this line, notably at Little Falls and Mountain View, but it still may be regarded as offering exceptional opportunities for the homeseeker.



Such nooks as this one in the Scarsdale estates can only be enjoyed by the man who chooses a mountain site

Caldwell and Essex Falls, on the Erie, offer well developed sections to the suburbanite who is partial to mountain country. Caldwell is high up, overlooking the surrounding country, and is noted for its fine climate. Many attractive homes have been built here lately, and the picturesque streets and well-wooded hillsides present many beautiful home sites.

The country is thickly settled, and practically one continuous city all through the Oranges, and as far as Short Hills. This latter place is a model suburban community in a way, but it has been settled for a great many years, and the values of its realty is high. Between Short Hills and Summit, a community is being developed, but the first real opportunity to secure a home in the country, as distinguished from the suburbs, and still within easy reach of the railroad station, will not be found until after Chatham, Madison, Convent and Morristown are passed.

Summit is but 20 miles from New York, and besides the many pretentious homes of the wealthy class, has opportunities for the less imposing dwelling. There is a metropolitan aspect to this town in its well regulated public works, sewage system, police de-



Mr. Lehman's house at Elberon is characteristic of the seashore homes on the Jersey coast



A home at River Edge, in sharp contrast, represents a moderate cost house well fitted for a dwelling in the hills



The Sound harbors have many inlets which make ideal spots for a shore home



The Sound is not always a mill pond. Sometimes the coast at Rye is picturesque with breakers

partment, etc. Montclair, of course, is of a similar type, and has almost every grade of home from the cottage to the mansion.

Beyond Morris Plains there are many splendid opportunities. This is in the very heart of the mountain and lake section—the first real country out of New York that is still primitive. With Denville as a centre, mountain ranges, rivers and lakes radiate in every direction. The interesting colony of Mount Tabor, originally started as a camp-meeting gound, like Ocean Grove, but now a prosperous summer colony for New York business men, is in this territory. The houses at Mount Tabor, however, are built in a thick woods and on very small lots, and practically no opportunity is offered for the man who wants a garden and a few hens, although he does have altitude, congenial neighbors, a golf course and some other compensating things. H. E. ANGELL



Some are not satisfied to build unless they can overlook the real ocean, as along the Jersey Coast

Salt Water Homes

To some, no place is deservedly a real home unless it is near enough to the salt water to hear the roar of the breakers, or to provide sailing and bathing opportunities. Along the Sound shore, besides the city of New Rochelle, we find the villages of Larchmont, Mamaroneck, Rye and Port Chester, each of these offering high-class accommodations in the way of shops and stores. All of the villages are on the lines of the New York, New Haven & Hartford Railroad, which runs parallel with the coast at a distance varying from one-quarter of a mile to two miles from the shore, so that there is a strip of shore front property east of the railroad which is rapidly being taken up by builders of homes of the better class. In acreage tracts it would be difficult to find anything truly desirable for less than $3,500 to $4,000; much of it is valued at $10,000, while lots of the usually city size, 25 x 100, or about that size, will vary from $500 to $1,000 apiece, according to their proximity to the water. Valuations also increase as the distance from New York City decreases.

In a general way, the same sort of country prevails along the Sound shore in Connecticut. Greenwich and the Norwalks offer particularly advantageous home sites along the coast indentations, with a wide enough range of prices to suit any pocketbook.

(*Continued on page* 304)



Larchmont Manor has much to offer the home seekers in the attractive house of moderate size



The Sound shore is dotted with yacht clubs, where the suburbanite may indulge his love of sailing



ALLURING AND PICTURESQUE WESTCHESTER COUNTY

That the population of New York City will very soon reach five millions, with a relatively large growth in the population of Westchester County during the same period, there can be no question. The continually increasing congestion of the residence districts of the great city must naturally prove a tremendous incentive to the most desirable class of people to seek and take advantage of the wonderful opportunities afforded home-seekers by the development of satisfactory transportation facilities between the business and manufacturing districts of the city and the attractive suburban territory in Westchester County.

With the opening of the New York, Westchester & Boston Railway in the near future, the home-seeker who desires to dwell amid healthful and attractive surroundings, will no longer be restricted to the old-fashioned commuter opportunities and facilities afforded by steam railroads, to which commuter business is necessarily a secondary consideration. They will be enabled to reach distant points in a short time and at frequent intervals, as the trains will be operated on short headway and in direct connection with all of the subways at present existing and yet to be built, as well as with the several elevated lines, and will give both express and local service with an up-to-date transfer system between its express and local trains, affording its patrons the necessary accommodations to enable them to reach any destination desired in the shortest possible space of time.

Large sections of the most picturesque and desirable parts of Westchester County are being brought within quick commuting distance by the building of this road, and the management of the road, through its Bureau of Information and Department of Real Estate, is working in harmony with the real estate interests along its line and offering every possible encouragement for the building of homes and the development of the territory traversed by it. The road itself is the finest example of up-to-date railroad engineering and construction in the United States. Its roadway and structures are of the highest type. Its stations are artistic in appearance, marvels of convenience in arrangement, and hygienic in construction. The road will be equipped with the latest type of steel cars, so arranged that the smallest possible amount of time will be consumed in receiving and discharging passengers. Everything in connection with the building and equipping of this high-class rapid transit line is being done with an eye single to the safety and comfort of its patrons and to the end that the service given them will be in every way satisfactory and the best attainable by human ingenuity in the evolution of the problems of transportation.

Fortune and happiness wait on opportunity. For the opportunity consult the Bureau of Information of the New York, Westchester and Boston Railway, 65 Beaver Street, New York.

WAMPAGE SHORES

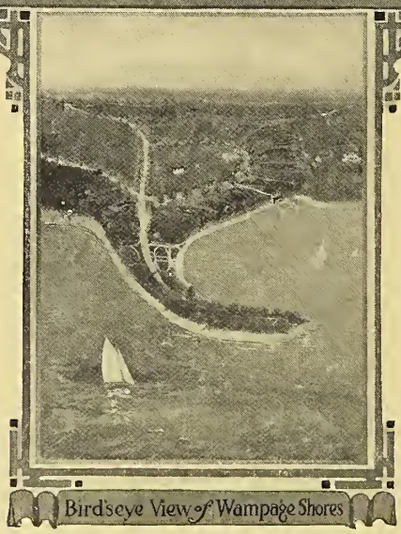
Actual Water Front

Sands Point, Long Island

Residential Plots
¼ acre up

Clean White
Sand Beach

Deep Clear Water



Bird's eye View of Wampage Shores

Ready This Spring

No other high class property on the market offers the buyer actual frontage on the water, there is always a road or reservation in front of the plots.

A mile of water front — Manhasset Bay, Sands Point. Opposite Great Neck. Railroad station — Port Washington.

If you are looking for the most beautifully located, highest type, carefully restricted, developed property for your home, let us tell you all about WAMPAGE SHORES. Every essential feature of modern improvement.

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542 FIFTH AVENUE, NEW YORK
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No. 1.



Near the Greenwich Country Club

No. 1. Colonial dwelling commanding beautiful scenery in all directions, two miles from Greenwich railway station. Contains ten bedrooms and four baths; hot water heating apparatus; electric light. Also good sized stable-garage with complete living apartment. Grounds consist of five and one-half acres, two of which are well wooded, a pretty brook, formal gardens and lawns. Can be purchased at a very reasonable figure—immediate occupancy. Our revised list for 1911 of properties for sale and rent is most complete. Send your requirements and consult

Franklin Edson, Raymond B. Thompson Co.
Smith Building - Greenwich, Conn.
Telephone 729

No. 2



Adjoining Greenwich Field Club

No. 2. This most attractive property, containing two and one-half acres of land, well laid out in lawn, trees and shrubbery, tennis court, garden. House contains well arranged living floor, and especially good domestic offices; six masters' bedrooms and three baths; four servants' bedrooms and bath. Also good sized stable-garage, with complete living apartment. Our revised list for 1911 of properties for sale and rent is most complete. Send your requirements and consult

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Here is the house as it stands to-day—substantially built and well adapted for remodeling



A suggestion indicating a possible solution of the transformation problem

Walnut Grove Farm—An Opportunity in Remodeling

A FARM OF THIRTY-FIVE ACRES, WITH A SUBSTANTIALLY BUILT HOUSE AND STABLE THAT COULD READILY BE DEVELOPED INTO A MODERN COUNTRY HOME OF CHARACTER

IN Stamford township, just two miles from the town of that name, there is a farm of thirty-five acres that is going to make a country home of real distinction for the man who first appreciates its possibilities.

Stamford, as everybody knows, is one of the most attractive places within reach of New York. Situated on the north shore of Long Island Sound, it has the advantages of a beautiful harbor, well organized yacht clubs and the refreshing breezes from the salt water. Fine schools and churches, and electric express service to New York over the New Haven Road—covering the thirty-five miles in fifty minutes—are but a few of its more obvious points of attraction for the man who wants to keep in touch with New York City without the necessity for living day and night in its crowded thoroughfares.

Walnut Grove Farm is particularly fortunate in its natural advantages. The grounds are planted with stately shade trees, hardy flowers and shrubs, and an orchard of more than a hundred and fifty fruit trees—in addition, of course, to the beautiful stretches of fertile meadow land that would gladden the heart of any man that feels the call of the soil surging in his veins. Just imagine the fun of transforming the little lake that is pictured below into a splendid feature of your country home—the naturalizing of colonies of Japanese iris, moisture-loving lilies, and scores of the wild reeds, marsh grasses and such things around the water's edge. Do not such creative activities as this form one of the most fascinating sides of life in the country?

The house itself is a well built structure containing fifteen rooms and ample service quarters, electric lights, heating equipment, and is within the Stamford telephone zone. There is a smaller cottage on the place that offers possibilities as a servants' lodge, also a seven-stall barn. One of the illustrations above merely suggests the possibilities for remodeling the main structure.

Write Mr. Frank B. Gurley, 56 Park Row, Stamford, Conn., for any further information regarding this splendid possibility—the whole property is for sale on reasonable terms.



Here is a good seven-stall barn that could be turned into a garage





Just imagine the possibilities of developing this spring-fed lake—naturalizing lilies, iris and other moisture-loving plants around its edge



BOUNDBROOK

BOUND BROOK
THE PLACE TO DWELL

WE have for sale in this vicinity a number of desirable farms, gentlemen's country estates, high class suburban homes and other properties. Many of these are along the beautiful Raritan River, or in the Watchung Mountains and its foothills. Bound Brook offers the home seeker ideal express commutation, the best boating, fishing, beautiful drives and walks, well equipped country club and numerous other advantages. Permit us to send you our illustrated booklet (Bound Brook, the Place to Dwell) and additional information concerning its advantages.

CENTRAL NEW JERSEY REALTY CO.,
409 MAIN ST., BOUND BROOK, N. J.



This property, at Bound Brook, 10 minutes' walk from station, 55 minutes from New York and 1 hour from Philadelphia, for sale. Grounds 100 x 165 feet. Beautiful trees, fine lawn, etc. House, 10 rooms and bath, all modern improvements. Lower floors and stairway hard wood finish. Three open fire-places. Barn is two stories. On same general lines as house, has box stall for horse and room for carriage and automobile. Price, $8,500. For details, apply or call,

ROOM 4, 52-54 NEW ST., NEW YORK CITY.



FOR SALE

This attractive home on the best block in Bound Brook, N. J.

Surrounded by first class improvements. Three-story frame house, 12 large rooms, 2 baths, hard wood floors and electric lights; 2 story carriage house suitable for garage. Lot 110 ft. on Union Ave., running through the block about 390 ft. to Maple Ave. Beautiful shade and an abundance of fruit. **Price $12,500**

WM. H. WHITING & CO.
41 PARK ROW **NEW YORK**

Bound Brook, N. J.

A pretty little home in one of New Jersey's most attractive suburbs. Two and one-half story stucco house, lot, 58 x 160, surrounded by beautiful private hedge; summerhouse in rear; first floor:—hall, parlor, dining room, butler's pantry, kitchen; second floor:—2 bedrooms, bath, den and sewing room; third floor:—1 bedroom, maid's room and attic; basement:—laundry, furnace room, maid's bath.

Price $7,500. Terms to Suit.

Apply to N. H. BLAKE, Room 207
147 Nassau Street, N. Y.

For Sale—Gentleman's Country Seat

One and a half miles from Bound Brook Depot; about 40 trains. 22 acres lying between Macadam Road and Raritan River. Trolley passes the place. New eleven room house, three baths, large barn and outbuildings, fruit and shade. Price $30,000. For particulars address

S. A. DUTCHER
410 E. MAIN ST. BOUND BROOK, N. J.

Attractive East Orange House To Let for the Summer

To let, furnished, for the summer, airy twelve-room house with modern plumbing, situated in best section of East Orange, New Jersey. Auto shed on premises. Address owner, William Birdsall, 40 Prospect Street, East Orange, N. J. 'Phone 3463 R. Orange.



TO close an estate. Elegant new country residence in the heart of residential Bound Brook, within 55 minutes of New York. 14 rooms, 4 bathrooms, steam heat, gas and electric lighting, and all modern improvements. Large stable and garage, with two servants' rooms, Grounds 200 x 400 feet. For particulars apply to the executors. 18 & 20 Platt St., New York City.

BEECHWOOD HEIGHTS

SITUATED in the foothills of the Watchung Mountains, an easy ten minutes walk from Bound Brook Station, 55 minutes from Broadway. More than sixty trains daily each way! The best express service out of New York, on the Central Railroad of New Jersey.

This tract, located on the main auto road between New York and Philadelphia, is desirable in every way for beautiful suburban homes. The ground is smooth and rolling, ideally located and has all of the advantageous restrictions. No property less than 100 x 200 feet, and but one house to a property. No stores or factories allowed. Macadam streets, gas, electricity and city water.

It is easily accessible to the Bound Brook Country Club, the Raritan River and the Watchung Mountains, the most beautiful range near New York. Trolley runs through the tract.

This is the cheapest proposition in New Jersey today for the seeker after a high class suburban home.

Lots 100 x 200 are from $500 to $700 each, according to location.

FIELD BROTHERS & HASTINGS BOUND BROOK, NEW JERSEY

COZY COTTAGES



IN A MASTER DEVELOPMENT. All those modern features that make for comfort and livableness, and which are usually associated only with high-cost houses, are to be found, at moderate prices, in the cozy one-family "Ackerson Cottages," just completed and welcoming your inspection at—

Brightwaters

BAYSHORE, L. I.

These home-like cottages are built on plots 100x150 feet (equal to 7½ city lots), and within easy walking distance of station, lakes, yacht harbor, casino, bathing pavilion and the other attractive features of Brightwaters.

Each cottage has large living room, broad open fireplace, dining room, kitchen (equipped with laundry tubs, running water, range) with from three to six sleeping rooms, modern bathroom and spacious porch.

They are equipped with gas and electric fixtures, screens and shades. Decorations quaint and restful.

Prices begin at $2,900, then $3,500, $3,600, $3,700 and by easy stages up to $5,900.

Also a few at from $7,400 to $9,000.

Cottages or choice building plots may be purchased on suitable terms.

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Families of good taste, no matter how ample or restricted their means, will find their ideal of a suburban residence place beautifully realized at Brightwaters.

Readers of HOUSE AND GARDEN are cordially invited to visit "Brightwaters" as our guests, inspect the new Ackerson cottages and see the many attractive features inaugurated in this popular development.

De Luxe Booklet C and Postcard Folder of Cottages Upon Request.

Schools, Churches, Stores and all Essentials.

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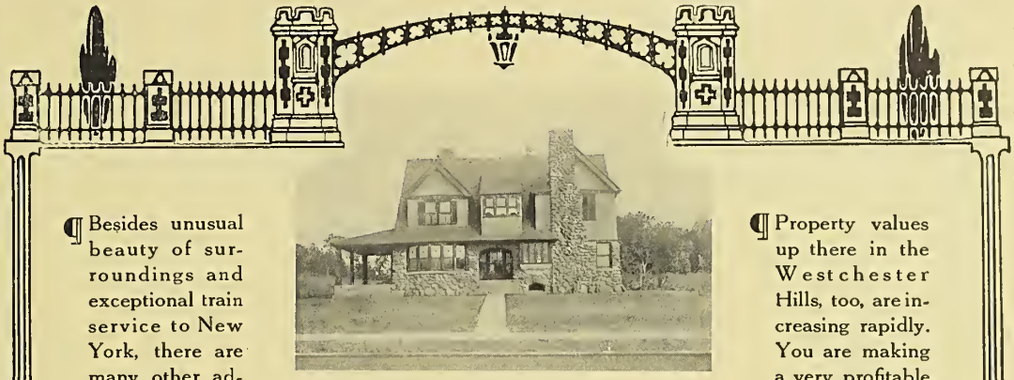


"Edgemont Estate" At Scarsdale Station

The ideal realization of **out-of-town** living. A delightful **home community,** for all-year residence. Protected social environment, the charm of the country, all city improvements. Immediately at station, only 19 miles, on Harlem Elec. Div. N. Y. Cent. R. R.

Scarsdale Company, Owners
J. Warren Hayer, Pres.

Scarsdale, N. Y. Westchester Co. | 503 5th Ave., N. Y. Corner 42d Street



¶ Besides unusual beauty of surroundings and exceptional train service to New York, there are many other advantages in buying a home at Scarsdale Estates

¶ Property values up there in the Westchester Hills, too, are increasing rapidly. You are making a very profitable investment as well as buying a delightful home.

SCARSDALE ESTATES

THE HOMELAND IN THE HILLS

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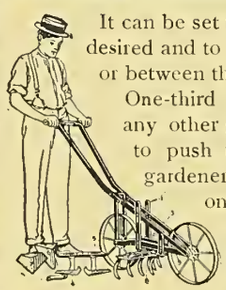
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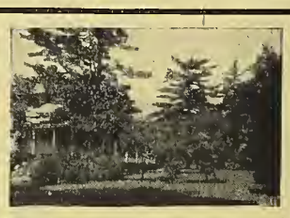
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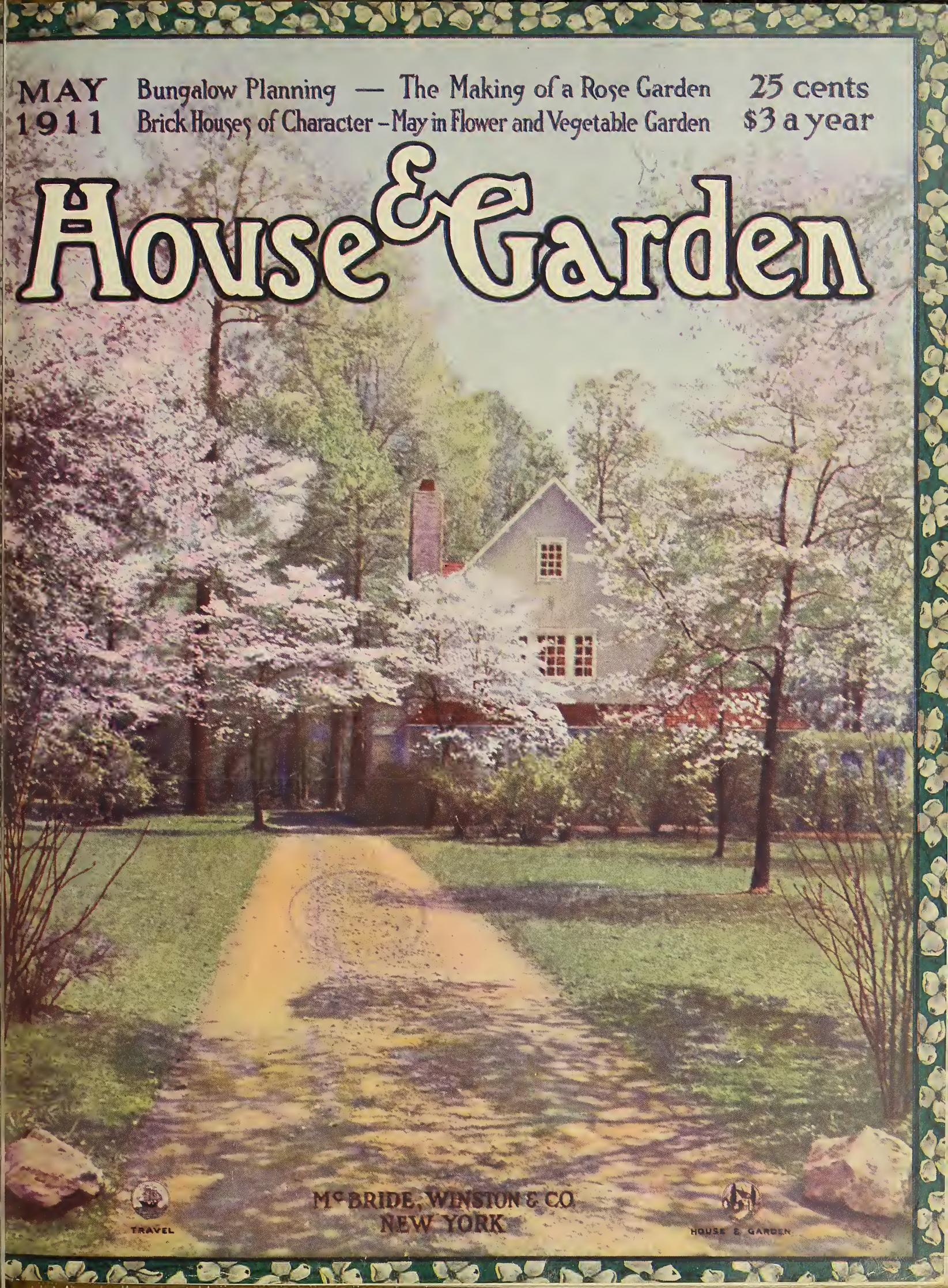
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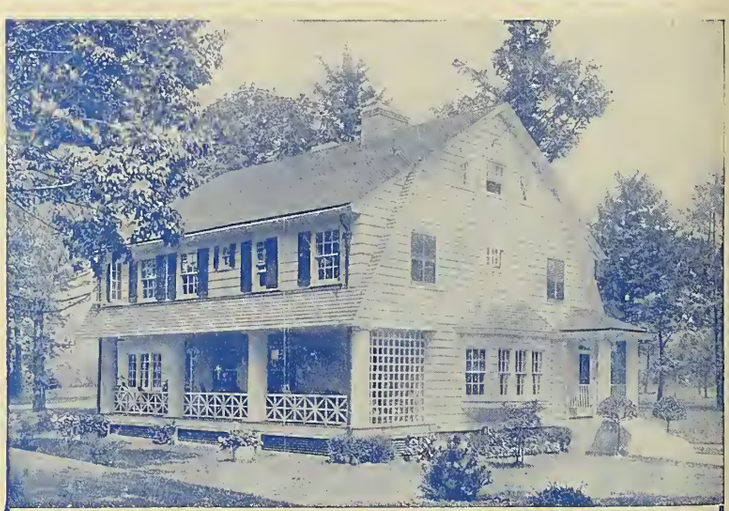
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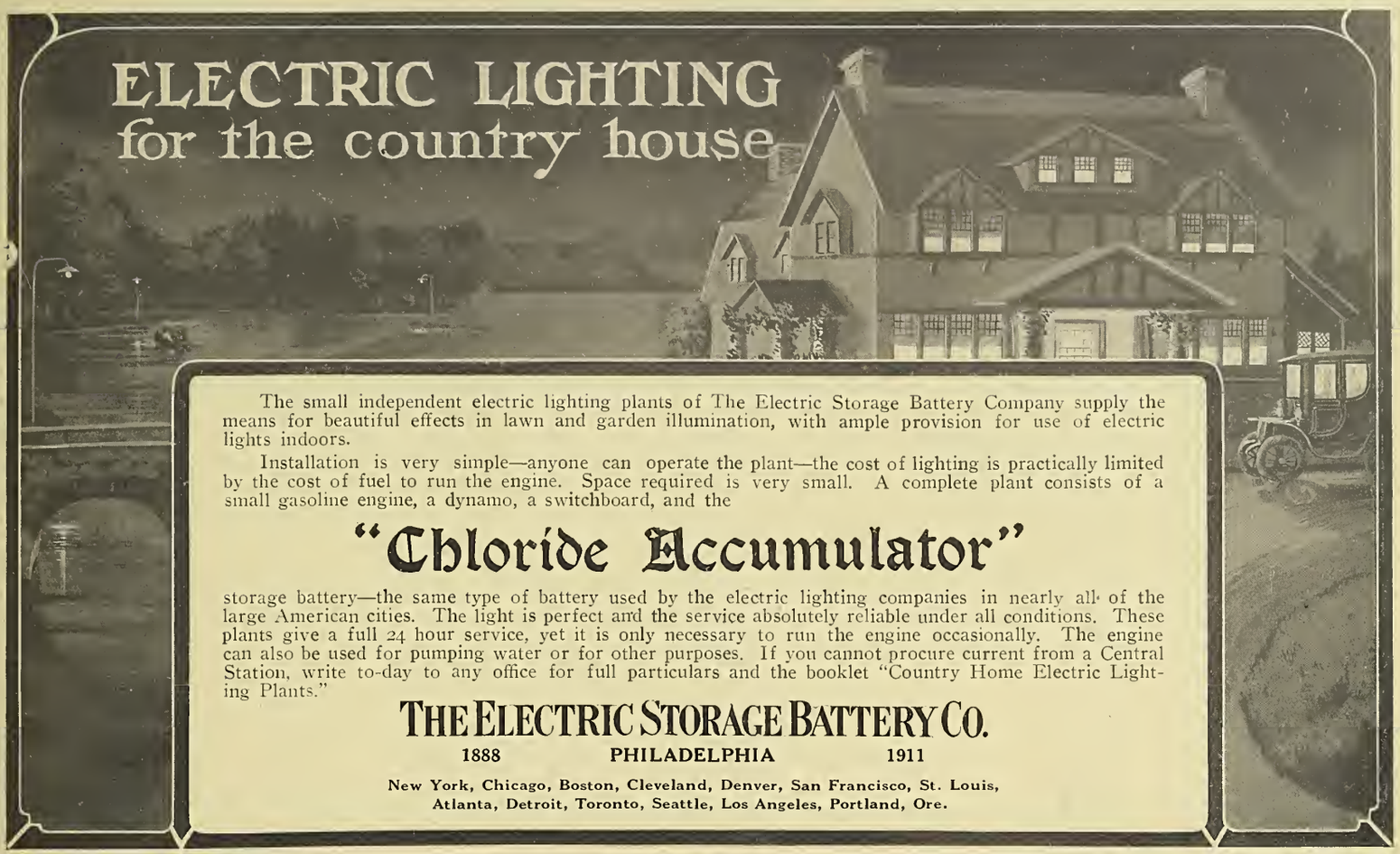
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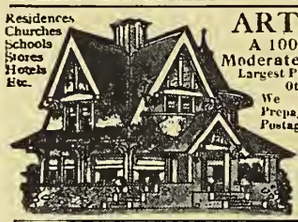
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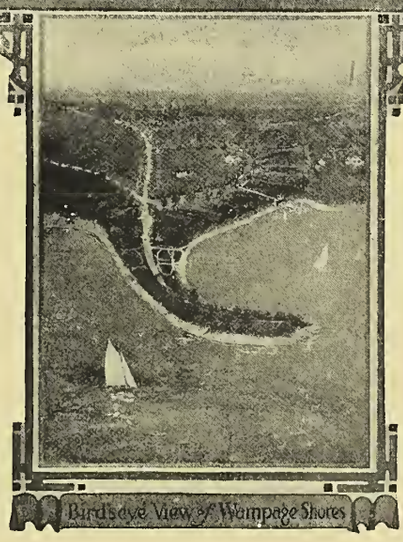
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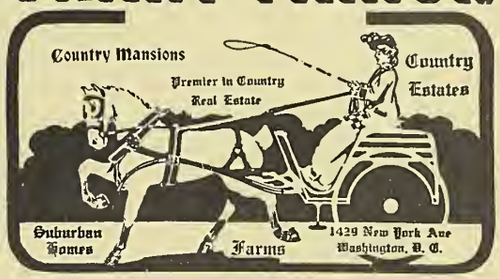
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Rapid progress is being made by the officials of the Real Estate and Ideal Homes Show in arranging the preliminary details for this year's exhibition. The general scheme for the decorations has been decided upon and every exhibitor will be supplied with a number of evergreen trees to be placed alongside the booths.

In regard to the musical programme, it has been arranged for the Royal Venetian Band to make their first New York appearance at the show and to give daily concerts during the afternoon and evening. It is expected also that the Woodmere Realty Company, who have leased the concert hall, will give prospective homeseekers looking over their photographic display an opportunity to hear a number of well known soloists and musicians.

Among the spaces contracted for this week were two for the Rickert-Finlay Realty Company, who will have an attractive exhibit showing their various Long Island properties. The decorators have already started work on the display for the Neponsit Realty Company, who intend to show the various types of houses they are building, together with paintings showing the outlook on the ocean and bay sides of their development at Neponsit.

Numerous inquiries have been received from brokers and boards of trade throughout the country, and it now looks as though many out of town realty men will visit New York during show week.



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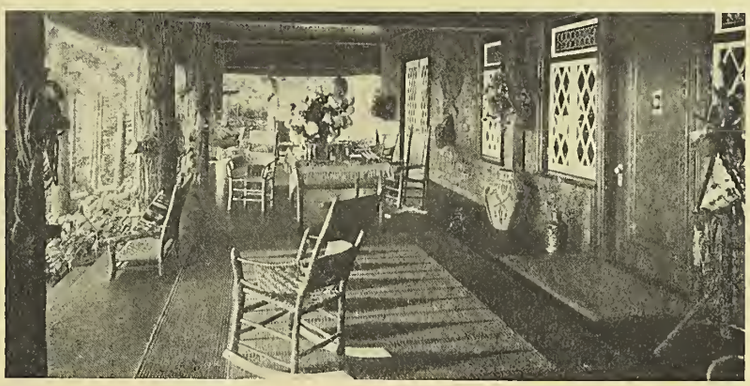
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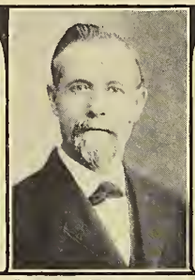
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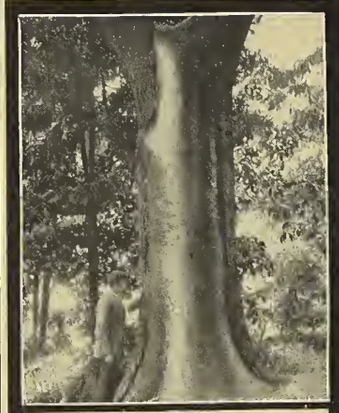
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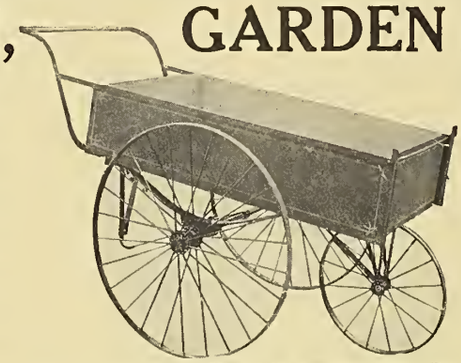
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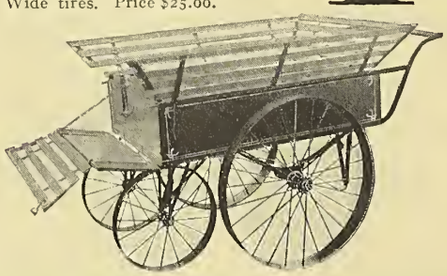


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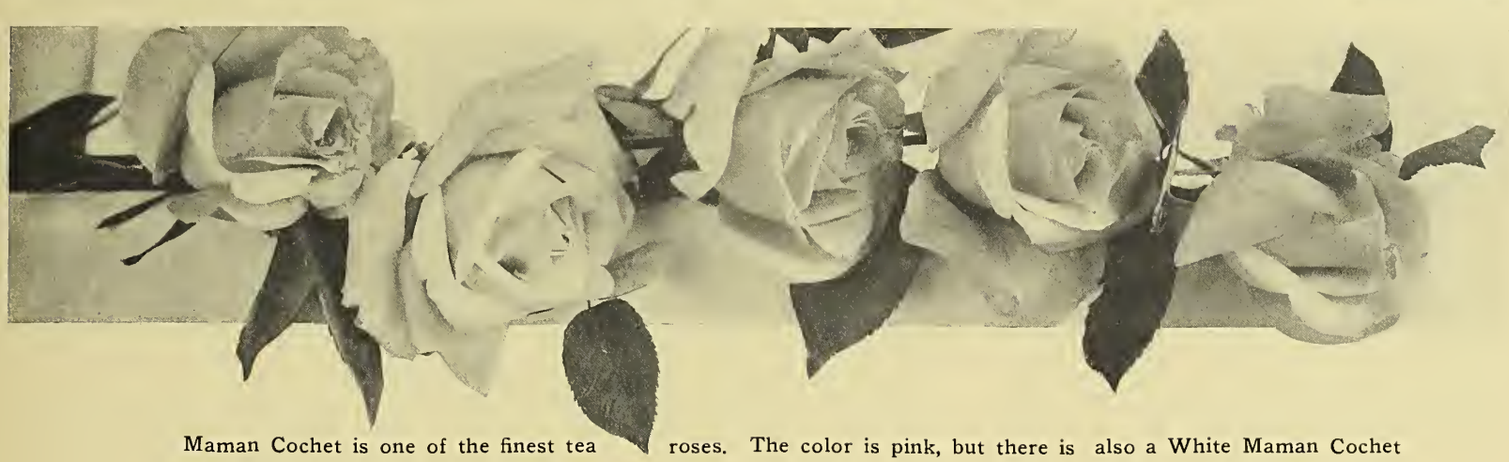
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"Only an idle little stream
Whose amber waters softly gleam,
Where I may wade, through woodland shade
And cast the fly, and loaf and dream."—Henry Van Dyke

House & Garden

VOLUME XIX May, 1911 NUMBER 5



Maman Cochet is one of the finest tea roses. The color is pink, but there is also a White Maman Cochet

Making a Rose Garden

SUGGESTIONS FOR THE SELECTION OF A SITE, PREPARATION OF THE SOIL, CHOICE OF TYPES AND VARIETIES—THE ESSENTIALS OF ROSE CULTURE

BY RUSSELL FISHER

Photographs by Nathan R. Graves and Charles Jones

WITH all the difficulties that the amateur is sure to encounter in growing roses—and we must be frank in admitting that they are numerous—the results will well repay the effort. One frequently hears of amateur gardeners who have given up growing roses in their discouragement, but almost invariably they decide in a few years to try it again. The man who once has grown a beautiful rose finds it almost impossible to give up trying again.

And, after all, the difficulties are not overpowering. If the amateur rose grower will start in the proper way and observe a few of the main rules in the culture of roses, most of the great host of enemies that the rose possesses will not find a vulnerable point for attack.

The first essential is situation — an airy but sheltered spot, well away from the roots of any trees and open to the morning sun. Given a proper situation, the remaining essentials of good drainage; rich, deeply cultivated soil; and shelter, can be provided. It may be difficult to secure shelter from north winds and at the same time keep the rose garden well away from trees, but in some way this must be done. Remember that the root system of a tree will extend as far out from the base as the tree rises above ground. In case of necessity a masonry wall may be sunk as a barrier against too enthusiastic roots which would devour all of the rich food that the rose bed requires. Sinking a few planks on edge will accomplish the same result, at least for a time.



Keep the roses by themselves; they will not only thrive better, but their beauty seems not to be increased by comparison with other flowers

Avoid low ground for the rose garden. It is frequently not so well drained as it should be, and then, there is the added danger from the late frosts in the spring, which always make themselves felt in the low places.

Although we must have a rose bed before we can procure our rose bushes, it will undoubtedly be more interesting to take up the matter of selecting



Gloire Lyonnaise, one of the best white Hybrid Perpetuals



Mrs. John Laing is a splendid pink Hybrid Perpetual

varieties first. The enthusiasm aroused by anticipation will help us to overcome the later difficulties in the preparation of the ground.

Some years ago there were but two classes of roses—Hybrid Perpetuals and Tea roses, the latter so called because of their peculiar fragrance. After the first great effort of bloom in June the Hybrid Perpetuals seldom produced many flowers, so that it was necessary for the rose grower to depend upon the Tea roses for bloom during the later months of the summer. Unfortunately, however, the Tea roses are not absolutely hardy in the north, even in the latitude of New York. There are degrees of hardiness, and the Tea roses vary greatly in the amount of protection they require through the winter months.



The first two pictures show a standard rose before and after pruning; the third picture, a good healthy root system of the same type of plant. The standard is not so popular here as in England

Later, a new class of roses was produced by crossing the Hybrid Perpetuals and the Teas, and naturally it was called the Hybrid Tea. In its best forms it combines the hardiness of the Hybrid Perpetual with the long flowering season of the Tea, and upon it the amateur rose grower will wisely put most of his effort. Do not, however, if you are a beginner in the fascinating occupation of rose growing, omit entirely either of the older classes. The Hybrid Perpetual will always be relied upon for the bulk of the showing in the month of roses, while among the Teas are roses so beautiful that no one has any right to be without them. In addition to these three classes of rose bushes, there are the climbing roses, among which are the hybrids of *Rose Wichuraiana;* the *Polyantha* roses, among which are the well-known ramblers; the Lord Penzance Hybrids; Sweet Briers; and, for covering stone walls, *Rosa rugosa* and our own prairie rose—*Rosa setigera.* The subject of climbing roses, however, is one that might well be left to another article. By all means introduce some of these climbers, preferably the Lord Penzance Hybrids and the Wichuraiana Hybrids, into your rose garden—over an entrance arbor or over a row of arches spanning the central path.

It is a difficult matter, indeed, to select from the long lists of the nurserymen's catalogues a few that may be safely named as the best roses. In fact, it is a task that no one would care to undertake. It may be helpful, however, to add the following list; these are by no means the only good roses, but in choosing any or all of these the amateur cannot well go astray. For these lists, and for much of the information herein contained, I am indebted to Dr. Robert Huey, of Philadelphia — probably the most experienced amateur grower of roses in the United States. Dr. Huey has grown many hundreds of rose varieties, so his conclusions should save many a false step for the beginner.



Killarney is one of the finest roses that grow—a pink Hybrid Tea

Hybrid Perpetuals

White:—Merveille de Lyon, White Baroness, Frau Karl Druschki, Margaret Dickson, Mabel Morrison, Gloire Lyonnaise (in reality a Hybrid Tea, but as it blooms only in June it may be included in the Hybrid Perpetual class).

Pink:—Baroness Rothschild, Caroline D'Arden, Heinrich Schultheis, Her Majesty, Lady Arthur Hill, Mrs. George Dickson, Mrs. Harkness, Susan Marie Rodocanachi, Mrs. John Laing, Paul Neyron.

Red:—Captain Hayward, Fisher Holmes, General Jacqueminot, Oscar Cordel, Ulrich Brunner, Duke of Edinburgh, Duke of Teck, Duke of Fife, Etienne Levet, Prince Arthur.

Prince Camile de Rohan is the best of the very dark roses, among which also are Sultan of Zanzibar, Louis Van Houtte and Xavier Olibo. These, however, are weak growers and frequently do not bring their blossoms to perfection.



Ulrich Brunner, a red Hybrid Perpetual that has achieved an excellent reputation



One of the tried-and-true white Hybrid Perpetuals is Merveille de Lyon

Teas

I have found myself displacing practically all of the Teas with Hybrid Teas, since the perfection of the latter class. The loss of these Tea roses every winter, unless they were protected carefully under glass, is most discouraging. Among the hardiest and best are Etoile de Lyon, Francisca Krueger, Hon. Edith Gifford, Isabella Sprunt, Maman Cochet, Marie Van Houtte, Safrano, Souvenir d'un Ami, White Maman Cochet, Dutchess Brabant, William R. Smith and Harry Kirk, a very fine yellow.



Golden Gate, a cream white Tea rose shaded with golden yellow

Hybrid Teas

White or light-colored and mixed shades:—Viscountess Folkestone, Pharisaer, Molly Sharman Crawford, Ellen Wilmot, Grace Molyneaux, Antoine Revoire, Joseph Hill, Mrs. A. R. Waddell, Betty, Prince de Bulgarie, La Tosca.

Pink: — Killarney, Lady Alice Stanley, Lady Ursula, Dean Hole, Lyon Rose, Dorothy Page Roberts, Madame Edmee Metz, Lady Ashtown, Mrs. Charles Custis Harrison.

Yellow:—Duchess of Wellington, Mrs. Aaron Ward, Madame Ravary, Madame Melanie Soupert, Madame Hector Leuillot, Melody.

Red:—George C. Waud, Lawrent Carle, Gruss an Teplitz, Chateau de Closvoges.

Fall-planted roses do best in the vicinity of Philadelphia, for here they become established before cold weather sets in and are, therefore, ready to grow at the first touch of spring. Do not on this account infer that spring-planted roses will not succeed, for they will; but the bushes must be put in early—at the very first opportunity, so that they will have time to become firmly established before hot weather. Pot-grown plants from a greenhouse cannot, of course, be set out until all danger from frost is past. Roses that are planted so late cannot be expected to show really satisfying results in bloom the first year. Roses that are planted early in the spring, if field-grown stock, will with proper cultivation give at least a reasonable amount of bloom the first year, though not so much as in later years.

One hears a great deal of argument on the question of whether roses are best when grown on their own roots or when grown on a sturdier stock, such as Manetti for Hybrid Perpetuals and brier for Hybrid Teas, which are probably the best rose stocks for this

(*Continued on page 392*)



If you want quantity rather than quality of bloom, leave all the buds as at the left. If you prefer one fine rose instead, disbud

Planning the Bungalow

A FEW SUGGESTIONS REGARDING THE ESSENTIALS OF FLOOR PLAN FOR THE INFORMAL ONE-STORY HOME—THERE IS NO NECESSITY FOR SACRIFICING EITHER CONVENIENCE OR A CIVILIZED MODE OF LIFE



BY HENRY H. SAYLOR

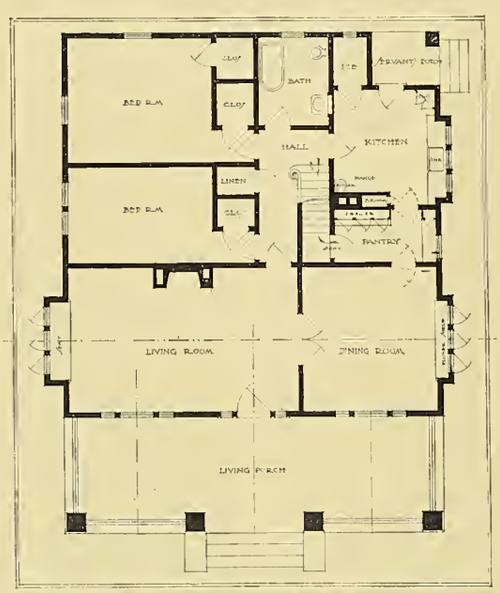
IT would seem at first glance an easy matter to design a house of the bungalow type, all upon one floor, without having to bother about stairs and head-room and such difficulties, but it is in reality a problem calling for genuine skill on the part of the designer. The main difficulty that the amateur will encounter in sketching out a tentative plan will be the separation of the sleeping quarters, the living quarters and the service portion of the house. Far too frequently we see a plan of a bungalow where the bedrooms open directly from the living-room, with perhaps a bathroom across on the other side of the building, next to the kitchen, for the sake of a condensed plumbing system. If a bungalow is worth building at all it is worth spending some time upon in the planning, so that the life of the household, while not of the severely formal type that the city house shelters, will yet be at least comfortable, and not robbed of all conveniences and privacy. The enemies of the bungalow—though they are few—have a foundation for their dislike of the type in the fact that far too many bungalows are so carelessly planned that life in them tends backward towards the less civilized past; in attempting to provide a field for a simpler form of life the unstudied and bungling plan fails to satisfy the fundamental needs of a self-respecting mode of living. We are far too ready to endure in a bungalow inconveniences that would not be tolerated in any more stable type of home. And the strangest part of it all is that these inconveniences are by no means necessary; the whole matter resolves itself into a need for more carefully studied plans.

The plan by Mr. King is convincing proof that the living quarters, service department and the bedrooms may be kept distinctly separate, without necessitating a rambling plan that is much more expensive to build. It is a well known fact that the nearer a plan approaches the square the more economically it can be built. Wings, ells and many angles mean greatly increased expense.

This particular plan may well serve as a type, permitting enlargement without destroying its essential fitness in the matter of the interrelation of rooms. For instance, additional bedrooms could easily be added in an ell at the back right-hand corner.

Too frequently a perfectly good living-room is spoiled by being darkened by a porch roof shielding its windows. This has been very cleverly avoided by Mr. King in the plan shown, and he has provided a porch off the dining-room that would undoubtedly be used frequently in the serving of meals. It may be objected that the other porch is too small, and it is undoubtedly a fact that we should have too much porch space rather than too little in a home where the great majority of the daylight hours are spent outdoors. It will be readily seen, however, that the porch in the plan mentioned could be prolonged, either to the front or the side, without affecting the plan, and, in the hands of a skilled designer, without spoiling the appearance of the exterior.

Another excellent type is the central living-room flanked by two wings, one containing the dining and service quarters and the other the bedrooms and baths, such as is shown in Mr. F. W. Wilson's design for his own bungalow. Here, however, two doors open from the living-room, each into one of the main bedrooms, which have the bath between them; where possible, it is better to have a single opening between a hall leading to the sleeping quarters and the living-room. Mr. Wilson has added another feature to this plan in the patio, reached through the French window in the living-room and having but one additional exit—a gate in the five-foot brick wall across the back.



Here is an excellent plan for a comparatively narrow lot. Hollingsworth & Bragdon, architects

Mrs. Girouard's bungalow shows another adaption of the center living-room scheme. Here, instead of allowing the side wings to project to the front or rear, they are carried straight out at the same depth. The result is an extremely long bungalow that is easily roofed and particularly pleasing in its exterior.

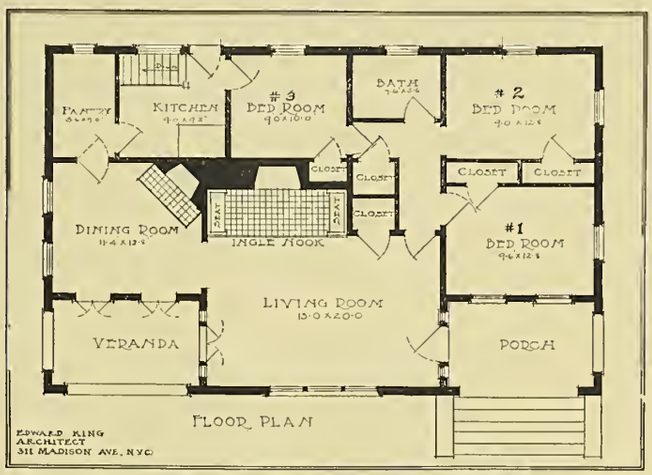
Another type of plan will be required if the bungalow is to be restricted in its site. A great many of the newer suburban communities are being built up with adaptations of the bungalow, usually with some second-story space, and too

frequently these have to be placed on a comparatively narrow lot.

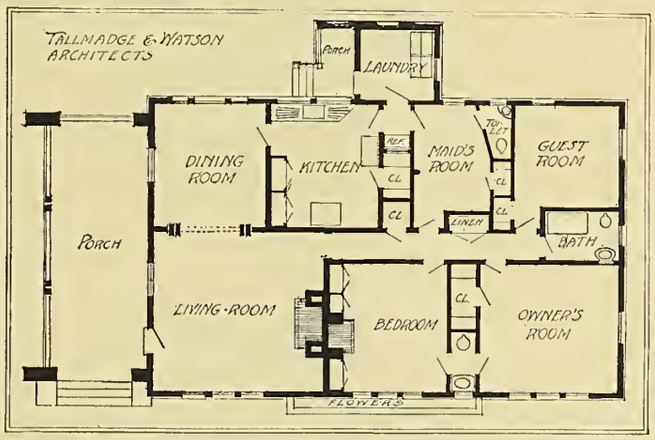
A good plan that could very easily be adapted to the long, narrow lot is shown at the right of this page. This one, which, by the way, provides for one large bedroom in the attic, is open to objection in the fact that the only way from the bedroom hall into the living-room lies through the dining-room, a point that might or might not be a disadvantage, according to the circumstances.

The plan at the bottom of page 336 is adaptable to such a site, and is in many respects exceptionally well thought out. In addition it has the advantage of being almost square, so that it could be built most economically. The plan of Tallmadge & Watson shown is also of this deep-and-narrow-lot type.

One of the problems in planning is to provide abundant porch space without darkening any of the rooms. This is not always possible when the most economical building is necessary, but the plans that are shown herewith will suggest a number of ways in which the porch may join the living-room without darkening it to any extent. It is surprising that many bungalow builders do not break away from the regular porch roof and work out an arrangement of open rafters, to be covered by vines or by a roll awning. Some such arrangement as this, together with at least a portion of the porch space entirely uncovered, would be a good thing to strive for in planning.



A remarkable plan in that the sleeping quarters and the dining-room and service quarters are both isolated from the living-room. The plan is an inexpensive one because it so closely approximates the square



For a narrow lot it is more difficult to work out a satisfactory plan. If one is willing to dispense with an entrance hall this is an excellent arrangement

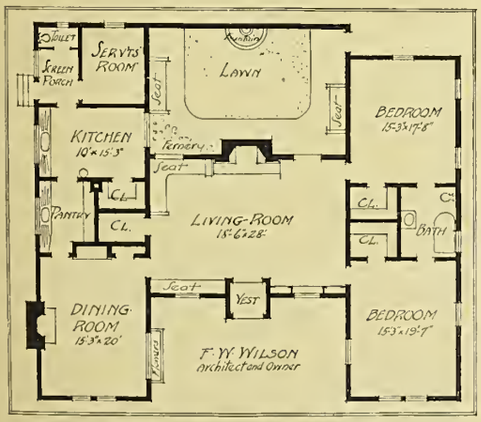
constantly in the designer's mind when working out a floor plan, and that is the necessity for keeping the floor area as a whole one that permits of a simple and inexpensive roof. Keep the plan within the boundaries of either one long rectangle—for a roof of two planes, or of several well connected minor rectangles where



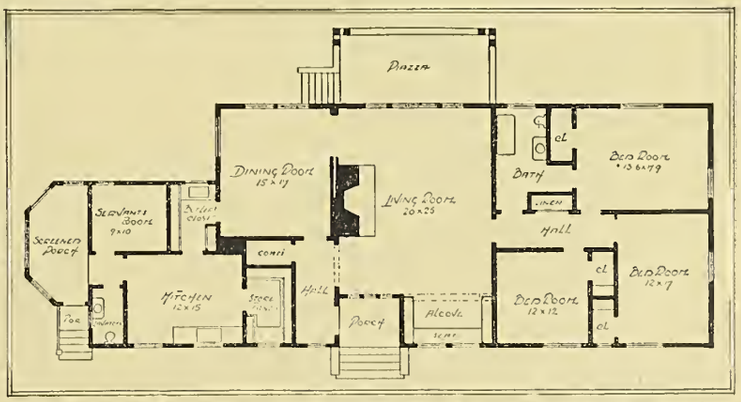
A plan for the narrow lot, but the way from bedrooms to living-room lies through the dining-room. Reeves & Bailey, architects

Then too, do not forget the sleeping-porch. It would be a very easy matter indeed to arrange for a sleeping-porch in conjunction with almost any of the bedroom wings shown among these illustrations of plans. Unfortunately none of the examples illustrated show this, but some of them do show another feature that is a product of the West and which we of the East might well borrow in planning our bungalow. I refer to the screened porch, without which no Southern California home is considered livable. On it most of the kitchen work is carried out in the comfort that a well ventilated, vine-shaded, outdoor room alone can bring.

There is one other consideration that must be kept gabled roofs may be employed. Excepting in the case of a plan that approaches the square, where the roof may be of four planes terminating in a central point, it will be well to strive for one main rectangle, that is considerably longer than wide, with smaller adjoining rectangles that will be covered by gables in the main roof. And in order to secure that blanket-like roof that is associated with the true bungalow type, the main roof or its gables will usually cover the porch space as well as the interior with a minimum of breaks. In other words, instead of providing a separate roof for the porch, the main roof or a gable serves the purpose.



The central living-room type will frequently be found the best plan. This one has a patio in the rear



Plan of the bungalow of Mrs. D. H. Girouard, Altadena, Cal.—an elaboration of the central living-room type. The long, narrow rectangle is likely to make a building of better appearance

The Month's Activities

A PRACTICAL GUIDE FOR THE AMATEUR IN FLOWER AND VEGETABLE GARDEN IN THIS BUSY SEASON—SPECIAL CULTURAL INSTRUCTIONS FOR THE THINGS YOU WILL PROBABLY GROW

Photographs By E. J. Hall and N. R. Graves

[This is the second of two articles covering garden problems for the busy man or woman who has not had time to make plans, manage a coldframe and in other ways get ready for planting-time. What may be done now, to make up as far as possible for lost time, and to insure satisfaction in both the vegetable and flower garden, is conclusively told.—EDITOR.]

HAVE you ever gone past a place on a May morning, where the florist and his man were digging around in the bare, brown beds, and mussing the place up still more by spilling dirt and manure all over the beautiful, clean lawn—and then, coming back that way at night, been startled by the change in the look of things? Summer has sprung full-fledged, or rather full-flowered, on the grave they were filling over departed winter. The bare brick foundations of the house have disappeared; in their stead are the bright blossoms of geraniums. The paths are bordered with gray or silver, or more prominent colors and graced with lines of green. Here and there, in nook and corner, other things have come suddenly into existence. All is transformed.

Now, of course, such a metamorphosis may be a matter of great expense—and, again, it may be largely only a matter of brains or taste in using the inexpensive things in effective ways. So before you go to the florists to select your plants this year, why not first make up your mind as to what you are going to try to do? Decide first what effect you want, and choose your plants accordingly. Ninety per cent. of those who buy simply pick out a flower here and there at random, with absolutely no regard for variety or color and without knowing, until they get home, where they are going to put them. Take the trouble to be one of the sensible ten per cent. and you can make your flower money go three times as far by selecting plants to meet a predetermined purpose.



This month sow seed of the Shirley poppy —one of the most beautiful of annuals

Another often needed word of warning is in regard to choosing plants. The great majority of people will pass the thriftiest, stockest, plants, even when well budded, to select far inferior ones with flowers—sometimes just ready to drop. When buying plants remember that you want them for long continued results; don't be tempted by present bloom into getting poor stock.

Flowers for setting out in spring or sowing in May may be grouped into three general classes. (1) Those for beds and solid masses; (2) for borders or edgings, and (3) for individualistic effects, such as groups in the corners of the lawn, or in front of shrubbery or raised verandas, etc. Among the best for massing and beds are: asters, California poppies, cannas, columbine, chrysanthemums, cosmos, cornflower, dahlia, fox-glove, geranium, Iceland poppy, lupine, marigold, nasturtium, pansy, peonies, petunia, phlox, pink, Oriental poppy, salpiglossis, salvia, snapdragon, stock, sweet alyssum, verbena, zinnias and gladiolus.

For borders and edgings, those most commonly used are: ageratum, candytuft, cockscomb, daisy, forget-me-not, variagated geranium (such as Mme. Salleroi and Mrs. Pollock), lobelia, love-in-a-mist, dwarf marigold, mignonette, dwarf nasturtium, pansy, portulaca, pyrethrum (golden feather), salvia (dwarf), sweet alyssum, verbena, dwarf zinnia (such as Little Red Ridinghood).

For single plants, ornamental groups and screening: columbine, anemone, bleeding-heart, campanula, castor bean, cosmos, dahlia, fox-glove, gourds, gladiolus, helianthus, hollyhock, iris, larkspur, mallow, moon-flower, morning-glory, climbing nasturtium, rudbeckia, salvia, sunflower and sweet pea.

This classification, of course, is meant to be suggestive; there is no hard-and-fast rule as to the use of plants, and very frequently most pleasing effects are gained by using



The prejudice against cannas is overcome if they are properly used as in mass effects



Buy young plants of salvia now to secure the deep red of its blooms late in the summer



Cauliflower needs lots of moisture to produce large heads. Blanch by tying leaves together or covering with paper

them in unusual ways. But there are hard-and-fast rules about treating your plants—if you want certain results. In the first place, you must abandon the idea, if you have it, that you can set out a plant, even a good, healthy one, in any old spot and watch it grow and bloom without further interruption. The farmer would no more think of feeding and caring for—or rather starving and neglecting—his onions and potatoes, the way many persons do their flowers, than you would think of sending your boy to school without his breakfast. Prepare the ground for your flowers and plants just as thoroughly as you do your garden path, and if you are not in the habit of preparing that carefully, read the April House and Garden. Enrich each bed and spot, no matter how small, with fine, rotten manure, or, if you cannot obtain that, with chemical fertilizers. Spade the soil up deep; pulverize it thoroughly, and then you will have laid at least the foundation of success with your flowers. That is not all, however; you must plant carefully. I suppose literally thousands of dollars' worth of plants are lost annually through the very common mistake of setting plants loosely. Put your plants in firmly.

There seems to be an idea prevalent that the making of a new flower bed is a very difficult art—otherwise we would see them more frequently. As a matter of fact, it is a very simple task; and there are dozens of lawns and front yards in every community which would be greatly improved by a bed or border which could be made in two or three hours' work with a spade and garden line. Select a spot—not in the shade or near trees, whose roots take food and moisture quickly from the soil—and line out the bed, using a dozen or so pieces of shingle or short stakes. If it is to follow a curve, use the line to describe an arc, marked as you progress by stakes; or set them in approximate position and then move one here and there until you get a true curve. With an edger, or the spade, cut neatly along the lines and then lift up the sod in squares, taking only the surface and leaving all the soil you can. Spade the bed up, down to poor earth, and enrich with fine manure. If the soil is very poor, or gravelly, haul in a barrowful or two of good garden loam. It will be well, in any case, to add enough soil to raise the center of the bed, which should be slightly rounded up a few inches above the level of the lawn. All the work necessary to keep such a bed in the best of shape is an annual application of manure and a mid season top-dressing of fertilizer, with an occasional trimming of the edges. Until you make one you can have little idea how much it will add to the appearance of your grounds.

IN THE VEGETABLE GARDEN

In the first installment of this article (see April House and Garden) we considered the preparation, manuring and planting of the garden. We saw how to get a good start; but to have a successful finish heed must be given to proper cultivation, the fighting of insect pests and the special requirements of various plants.

The small garden can be managed with very few and very simple tools. The most essential are a spade, two hoes—one large and one small-bladed (see article on tools in April number), a good steel garden rake, a hand-weeder and a plant-duster. I should by all means advise, however, the addition of a wheel hoe, which may be bought at from three dollars to thirteen dollars, and a compressed-air spray pump, which will cost from four dollars to eight dollars. This latter may take the place of the duster used for applying dry powders, but it will be well to have both when possible. Always keep your tools clean, shapely and in repair.



The finest onions are from seeds, but buy onion sets now as it is too late to start seeds, and plant in richest soil

A good many people—and some who have had gardens for several years—think that cultivation means only the removal of weeds that get large enough to threaten the existence of everything else in the garden. They were never further from the truth. As a matter of fact the destruction should be merely incidental in the practice of thorough cultivation. The real purposes of cultivation are two: first, to keep the soil so broken up and accessible to air and water that there will be a constantly sustained supply of available plant food, and secondly, to maintain a mulch of dust, or dry soil on the surface, and thus retain and conserve the moisture below; for a mulch of dust will keep the soil below it shaded and damp just as effectively as though it were a mulch of straw or leaves.

So do not wait until a rank growth of weeds compels you to cultivate, do it when it should be done. In dry weather try to get over all the surface between rows as often as once in every ten days. Remember that if you cultivate often so that no weeds get started, you can go over your garden with a wheel hoe or an iron rake nearly as fast as you can walk. Further weeding instructions are given on page 366.

At the second, or sometimes the third weeding, the plants are thinned to the proper distance in the row. It is a good plan to do this work on a cloudy day, or late in the afternoon. If the plants that remain seem at all wobbly, going over the rows and drawing up the earth slightly will prove beneficial.

Some plants, like potatoes, beans, and sometimes cabbage or corn, are benefited by a slight hilling, but this practice is not nearly so much used as formerly. The objection to it is that it exposes an unnecessary amount of soil surface to wind and sun, thus increasing the rate of evaporation.



The enemy of squash is the squash-bug, which must be killed in the egg state while attached to the leaves

The culture of vegetables has in many respects been simplified during recent years. But in at least one important thing the change has been in the opposite direction—and that is in the fighting of plant enemies, both insects and diseases. There seems to be a bug or worm for every plant that grows, and as the plants have, with the as-

(*Continued on page* 374)



We in America are just beginning to realize that there are wonderful possibilities in the ornamental treatment of brick walls. In this country home at Oyster Bay a rough-textured brick of peculiar shape has been used with great variety in bonding. Carrère & Hastings, architects

Building Brick Houses of Character

THE THREE METHODS BY WHICH BRICK WALLS MAY BE GIVEN A MORE INTERESTING AND VARIED TEXTURE—LESSONS FROM THE OLD WORLD

BY HAROLD DONALDSON EBERLEIN

[*Two houses that are alike in every respect but the brick walls, may be almost as dissimilar in appearance as if one were of stone and the other of brick. The best use of wall materials is a subject of as great importance as the architectural style that is to be followed, yet the layman, as a rule, seems not to appreciate this fact; to him a brick house is merely a brick house—until he realizes that his finished home falls far short of his ideal. This article is the third of a short series, in which the aim is to make clear the possibilities in securing distinctive character through an intelligent use of the various building materials. The author wishes to give credit to Mr. H. L. Duhring, architect, for many helpful suggestions.*—EDITOR.]

THE African negress with a big gold nose-ring hanging down over her blubber lips and her back hair skewered through with an imposing array of eagle feathers, is but obeying the dictates of a primal instinct of humanity in thus arranging her toilet. That instinct is the love or ornamentation. We find it no less in evidence in every aspect of civilized life—however, thank Heaven, in a somewhat different form. One phase of it, the use of certain forms of ornamentation in brickwork, is the subject of this paper.

As the different kinds of brick and the several bonds were treated in the February number, so in this issue are briefly considered some of the methods of employing these means to produce varied and decorative effects in the warp and woof of the wall. The practice of these methods is comparable to the textile weaver's art of applying patterns and design, the end being an imperishable adornment in brick and mortar. The comparison holds good even to this extent, that the mortar and the juxtaposition of the joints alone will often produce a regular diapered effect.

In America we are still in the infancy of brickwork. We have scarcely begun to open our eyes to the possibilities within our reach. An almost boundless field is spread before us. As it is our duty, on general principles, to avail ourselves of the opportunities offered us, so also is it our duty, our obligation, to provide for the beautiful.

The architect of a brick building has before him the pleasant problem of determining what he will do with the "field of the wall." It is, so to speak, a clean sheet for him to write upon, whereon he can unmistakably impress his individuality, if he will, just as did the medieval master workman upon their work, so that they could be recognized by it and one could say with confidence "So-and-so did that."

Since the desire for ornament is perfectly legitimate and as old as the human race, the only condition to be imposed is that it shall be in good taste. In brick ornamentation as in other things, we should exercise discrimination, choosing those things that are suitable and realizing "practical advantages and esthetic potentialities." As brick is readily moulded and manageable in form, and does not have to be quarried and hewn like stone, so it is cheaper and also susceptible of greater variety of treatment. Its uses in a decorative capacity may be roughly grouped under three heads; that in which diversification is gained by differences in the level of the wall surface, that is to say, when shadow and relief of line are produced by countersunk or projecting surfaces; second, that in which the manner of laying the brick on a perfectly

smooth wall face will weave a pattern of decorative worth and beauty, and third, that in which the element of color enters, and bricks of different hues are employed. Of course any of these varieties may be combined or all may be used at once.

The first variety is the commonest. We find examples everywhere in cornices, pilasters, molded or projecting horizontal bands, quoins—block-like corner projections as in the illustration—and half a dozen other forms.

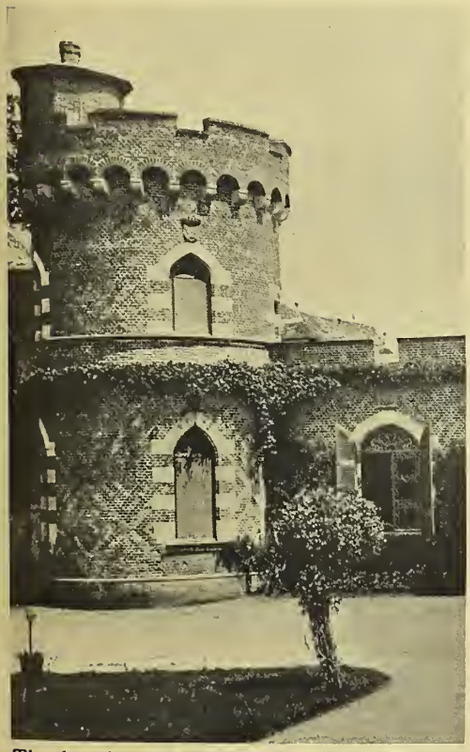
There is scarcely a brick building so severely plain as not to furnish some detail or ornament. In our cities, whichever way we turn, we find both dwelling houses and public buildings in abundance, adorned with brick cornices, some of them elaborate, some so simple that they scarcely afford a precarious nesting place for the sparrows that infest them. In this connection we can study with profit the work to be found on many of the old French châteaux, farmhouses, dove-cotes and barns dating from the Renaissance period. Another simple but effective form of ornament is found in countersunk or projecting string or belt courses. Often a single belt course between floors will transform a distinctly plain and unprepossessing building into a comely one. Sometimes by way of a frieze, or to relieve the monotony of a wall surface, a course of pilasters and arches may be brought out in high relief, the intervening panels being flush with the rest of the wall. Then again, brick foundations may be brought a foot or so above the ground and then graduated to the wall face by a molded cap course. In old houses we not infrequently see round



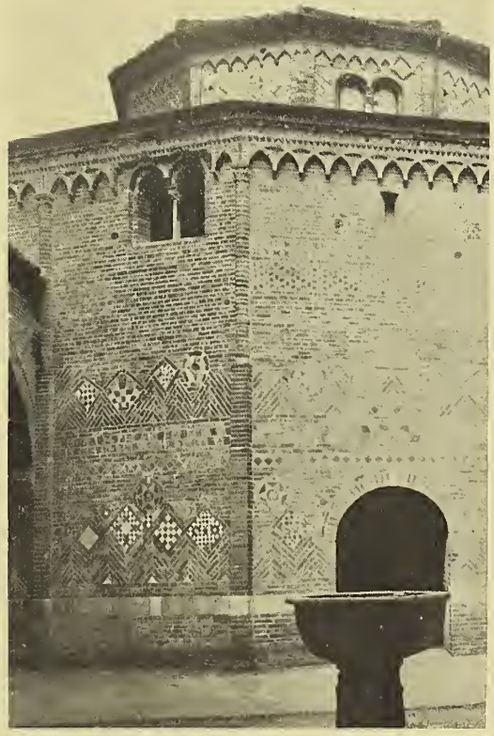
The Colony Club, New York—an example of the patterned surface and also of the value of countersunk areas in a brick wall surface. McKim, Mead & White, architects

arches above square windows, the tympanum (the part enclosed by the curved top) of the arch being countersunk several inches. Another simple form or ornamentation is to be found in the quoins so often met with on structures of Colonial date. Their interlocking appearance imparts an air of solidity and strength to a building. They were apparently once intended to stiffen the corners like buttresses, and were very likely borrowed from stone masonry. Even now, when their structural bonding function is not very seriously regarded, they do undoubtedly stiffen the corners, and as ornaments their presence is desirable although they are in a measure but survivals, like the sword buttons on our coat tails, or the vermiform appendix. All these forms of brick ornamentation, and more in the same category, are so common that for the most part we pass them by unconscious of their existence, but all possess genuine worth and possibilities, and all may add much character if judiciously employed. They are worthy of close study.

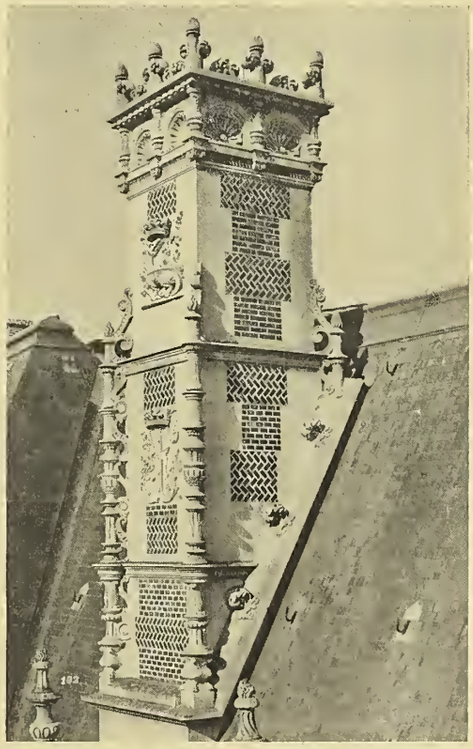
That sort of bricklaying which is ornamental in the pattern woven on the flat wall surface, opens up broad opportunities for originality and ingenuity. It may be either simple and direct, or highly elaborated in response to a wealth of imagination on the part of the designer. A careful investigation of this subject should be enough to convince anyone that ornamental brickwork may be perfectly dignified and legitimate, and plentifully possessed of scope for diversification without having to descent to



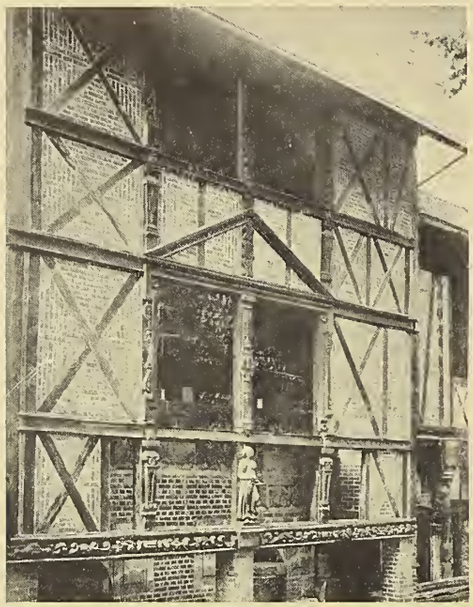
The hunting lodge of Moulemont, France. An example of the diaper pattern obtainable by different hued brick



San Stefano shows ornamentation obtained in bonding, as well as the use of colored marble pieces set flush with the surface



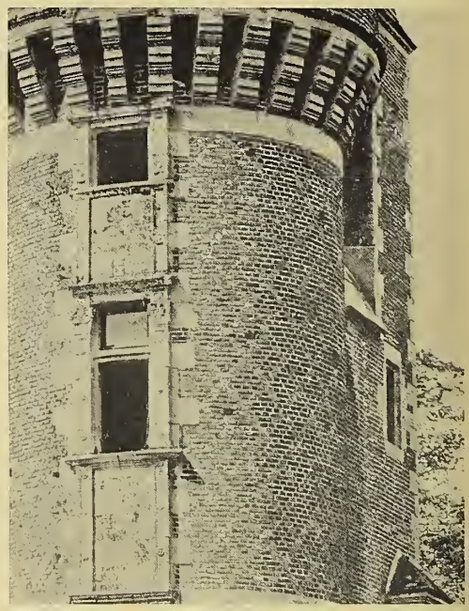
A chimney from the Château of Blois, France—alternating panels of herringbone and running bond, with stone quoins



An old house in Rouen illustrating the original construction of half-timber work with brick filling between the timbers



Corner block-like projections of this kind are called quoins. The motive is derived from stone work. St. Peter's, Philadelphia



The Château of Saint-Agil, where a diaper pattern is secured by the insertion of bricks of a contrasting color

meretricious terra-cotta gewgaws and gimcracks to satisfy demands for elaboration—not that terra-cotta ornament is not good in its proper place. One of the simplest forms of this kind of brickwork is a belt course made of a row of headers set vertically. Sometimes in old houses above the lintels of the windows a flattened arch is outlined in vertically laid headers with good effect. Then, too, keystone-shaped lintels, flush with the wall, are often made of bricks set vertically in the centre and spreading to convergent diagonals at the sides.

While on this particular division of the subject, it may be well to suggest that there are considerable possibilities in the use of bricks differently shaped from the ordinary type. We all know what a sense of satisfaction the introduction of the long, narrow Roman brick produced, even in absolutely plain wall surfaces, because of the difference in shape and size. We know, too, how pleasant it is sometimes to discover a bit of old English or Dutch brick, so-called, not because of importation from England or Holland, but because of their respective sizes and shapes that followed the patterns used in those countries. Undoubtedly some of the early Colonial brick did come from over seas, but most of it was made right here in America. If all the "English" and "Dutch" brick had really been imported it would have kept a tremendous fleet busy all the time exclusively in this traffic.

Twisted and overburnt "seconds" from the brickyards can be used to advantage and give a wall a unique appearance. One of the accompanying illustrations shows a pleasing use of a belt course between the first and second floors of a suburban house. It is the width of two stretchers laid vertically. The arches over the first floor windows are also of vertical bricks. The herring-bone design has always been a great favorite and the picture of San Stefano at Bologna shows an excellent use of it in connection with the insertion of colored marbles. In the chimney of the Château Blois we see a convincing arrangement of panels alternately of herring-bone and running bond. The scheme is peculiarly forceful and quite worthy of the great château in which it stands. The design followed in the front of the old house in Rouen, shown herewith, is decidedly unusual and presents a style of paneling that might fittingly be copied, with certain modifications. The crossed timbers and the arrangement of the bricks are strongly suggestive of rush-bottomed chairs. Dozens of good designs can be devised for panels and friezes, at the same time keeping a perfectly flat surface, and when combined with the former system of ornamentation, the possibilities are mightily increased. An interesting example of herring-bone setting combined with countersinking is seen in the tympana of the window arches in the Colony Club, New York, top of page 341.



A flat belt course of bricks on end gives an interesting line just below the second-story windows, as well as for window sills and arched openings. Guy Lowell, architect

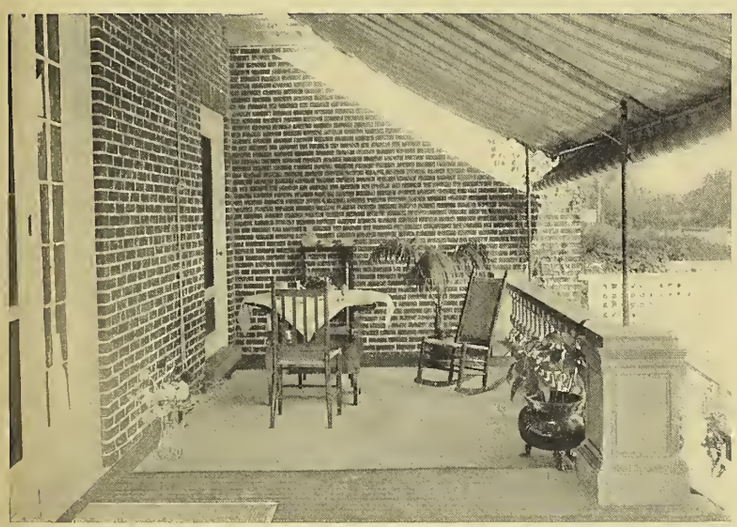
The last variety of brick ornamentation that can be mentioned here is the sort that makes use of different hued units to secure the desired end. We learn our most impressive lessons in this type from the buildings of the Renaissance period, mainly in Italy, France and Flanders. A riotous exuberance of genius dominated the architecture and luxuriated in a wealth of graceful form and gorgeous color that was not confined to interiors. Stone, brick and tiles were freely intermingled in exterior walls, and vari-colored materials were combined in a way to startle some modern no-

(*Continued on page 370*)

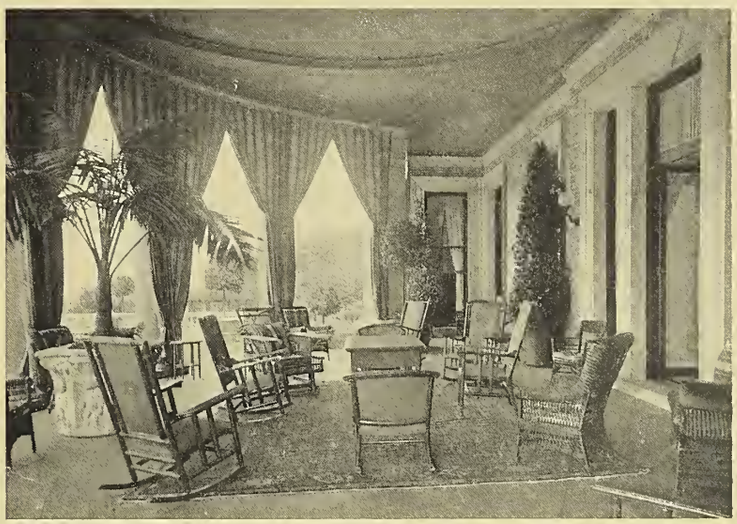
SOME AWNING SUGGESTIONS



The common striped awning in its various forms—for square-head windows above, round-head below. Where a house is of a solid color throughout, particularly in white, the strong contrast of the stripes is welcome



A terrace that may be shaded or left open to the stars by its roll awning on the framework of iron piping



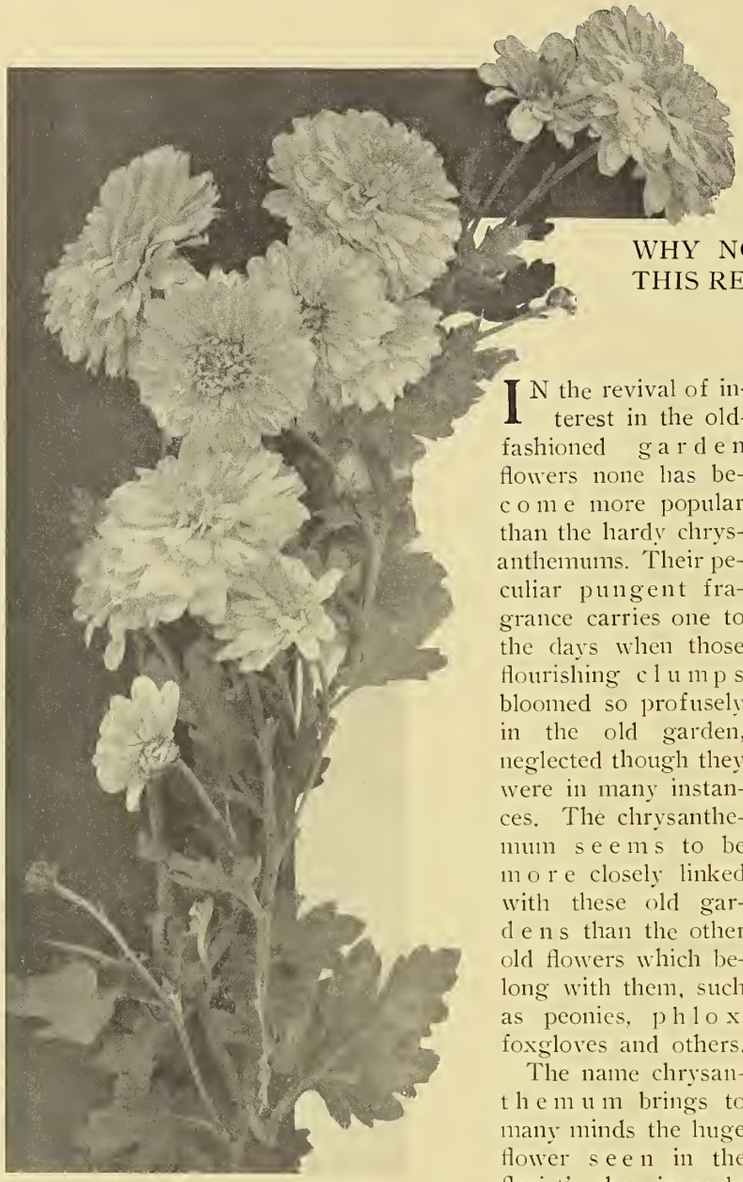
Projecting awnings would be awkward on the exterior of this curved porch; curtains of awning material solve the difficulty



The Flagler home at Palm Beach. Drop curtains on rolls are used; frame awnings would have marred the architecture



The new French awnings of white or light gray, with a narrow border, are more effective on a house of varied colors than here



The Chrysanthemum Outdoors

WHY NO GARDEN IS WORTHY OF THE NAME WITHOUT THIS REIGNING STAR OF AUTUMN—SET PLANTS OUT NOW

Photographs by N. R. Graves, C M. Weed and Chas. Jones.

IN the revival of interest in the old-fashioned garden flowers none has become more popular than the hardy chrysanthemums. Their peculiar pungent fragrance carries one to the days when those flourishing clumps bloomed so profusely in the old garden, neglected though they were in many instances. The chrysanthemum seems to be more closely linked with these old gardens than the other old flowers which belong with them, such as peonies, phlox, foxgloves and others.

The name chrysanthemum brings to many minds the huge flower seen in the florist's shop in early November and conspicuous during the football season. Though attractive in size and color, the real flower lover who has seen the hardy kinds in flourishing condition, considers them inferior to their smaller cousins. These large-flowered kinds are not hardy except when given protection, and then do not produce the same quality blooms as the greenhouse-grown ones.

Aside from the real pleasure to be had from the old-fashioned hardy kinds on account of the association, they fill a real need in brightening the garden late in the autumn when flowers are at a premium.

Success in growing these beautiful flowers comes from a careful selection of position and some attention to soil and conditions.

Flowering as they do, late in autumn when frosts are common, it is well to give them a sheltered position where their flowers will come to perfection without injury from frost. The south side of a wall or fence is ideal, or they may be put in the foreground of a shrub border where the taller plants afford the same kind of protection.

Gardeners in growing these plants for their flowers alone will often have them in a frame, where they can, in the late autumn, cover them every evening with canvas, keeping the flowers in this way from being in the least marred by the frosts.

Give chrysanthemums a light soil which is well drained. They will not flourish in clay or heavy soil, as it not only prevents a vigorous growth but subjects them to winter-killing.

In getting plants for setting out, secure young stock grown from cuttings, in preference to divided plants, as the former are more thrifty and give better results, as good gardeners will tell you. In growing them from cuttings struck in April or May the returns that season will be very satisfactory if the plants are well cared for during the growing season.

To prevent the customary trouble with aphis, a dusting of the foliage early in the summer with tobacco is effective. If later the aphis does trouble your plants, spray with tobacco water.

As the plants gain height staking is advisable to keep the stems from snapping in storms.

Wintering the plants proves to be a trying task with many and usually results from a desire to make the covering heavy. Heavy manure should never be used. It holds moisture and this results in rotting the crown of the plant. Use straw or leaves.

When it comes to a selection of the best varieties, it is rather difficult to be definite, as the named kinds that are sure to be known to all the growers, are few in number. The past few years, however, many of the growers have been growing certain well known types and these are the cream of the known kinds.

Among all the chrysanthemums the one held by the majority to be the real old-fashioned type is Autumn Queen, thought by some to be obtainable only from old gardens but now to be had from a number of sources. It is about the size of a silver dollar and a very pretty shade of rosy pink.

There are some extra fine varieties of the same size as this old kind, the best of which I will name. A pure white one, Soeur Melaine, is quite hardy and the flower full double. Everyone is attracted to Julia Lagravere, a rich dark maroon, and also Fremy, a German variety with crêpe petals of a pleasing shade of terra cotta. Mrs. Snyder, a rich golden yellow is quite large and showy. There are other very fine large ones, among which may just be mentioned, Globe d'Or, a fine lemon yellow; Victor, claret; Strathmeath, a large, clear pink; Prince Victor, brownish red and Stratagem, crimson, shaded gold.

The button type appeals to many people and from it the first to be selected is Brown Bessie, as it is almost as well known as Autumn Queen. A rich, golden yellow is Golden Mlle. Martha, and in Nellie Rainsford we have a mingling of orange, salmon and red. Model is a



The larger hardy chrysanthemums resemble asters in the size and form of their flowers

good white of this form, and through the florist many have become acquainted with the very small flower known as Baby. It is not larger than the head of a good-sized hat-pin and quite full and round.

There is a type with quilled petals that is decidedly pretty, the principal one being St. Illoria, of a deep shade of pink fading to a lighter pink after being open for a few days. Mrs. Vincent is a rich magenta of the same form, and both are good-sized flowers.

One single form deserves special mention on account of its distinctive color. It is called Sunset, the petals being of a burnt-orange shade which forms a striking contrast with the yellow stamens in the centre.

With such an array of color to brighten the Indian summer we should be sure always to include plenty of hardy chrysanthemums in planning perennial or shrub borders.

Warren J. Chandler.



The colors obtainable in the hardy chrysanthemum in all types range from white through yellows and reds

WE appreciate the crocus and the snowdrop because they appear before the snow has gone and show that spring has come again. In much the same way we appreciate the hardy chrysanthemums because they are the last of the season's flowers and remain beautiful even when touched by the first snow of the new winter. They are more hardy even than the wild asters, and are the chief dependence of northern gardens for outdoor blossoms in November. They are often called pompon chrysanthemums because of the small size of the flowers, which show all the colors of the large chrysanthemums, the yellows and the reds being especially attractive.

These chrysanthemums were grown in profusion in many of the old-fashioned gardens of two or three generations ago. When they waned in popularity many of them held on, surviving neglect with sturdy vigor, so that when flower lovers were ready to take them up again they were to be found here and there in sequestered corners of the old gardens. To a considerable extent such varieties were gathered in by neighboring nurserymen and given new names because the old ones were not known.

One of the largest plant dealers in America now lists thirty varieties of hardy pompon chrysanthemums. Another important firm that specializes in plants for border gardens lists twenty-four of the best sorts. These are both Pennsylvania firms, and it is significant that the catalogues of firms farther north that grow their own plants have fewer kinds for sale. This very likely is due to the lack of hardiness of the missing varieties, and it is a reminder of that excellent rule for buying hardy perennials—buy from north of your own latitude rather than from south of it.



There are fewer singles than doubles among the hardy varieties, but these few daisy-like forms are particularly attractive

While it is often stated that these chrysanthemums are hardy in the most northern States, this is by no means true of all varieties. North of the latitude of New York City a careful selection either of hardy sorts or of acclimated strains is desirable. A few years ago I set a number of varieties in a favorable position in Massachusetts. The bed was given good winter protection, but very soon all the plants had disappeared but two sorts which thrived and spread. On inquiry I found that at least one and perhaps both of these survivors had been obtained from an old-fashioned garden nearby, where they had been grown for a long time. Of another lot of plants shipped from farther south and carefully protected in winter, only a few survived to the second season Consequently it seems well worth while for northern gardeners to order their plants from nurseries at least as far north as they live and to insist that the plants delivered shall have been grown locally by the dealer. This will make the likelihood of survival much greater

A protected border within easy view of the house is an especially desirable place for planting these hardy chrysanthemums, where the flowers will add to the cheer of the waning season. If the flowers are to be cut, however, they should be in a more remote situation, but still near a protecting wall or hedge to keep them from full exposure to the cold autumn winds. They are especially effective in masses, so it is much better to plant them so that there are many together rather than singly at some dis-



As a cut flower the hardy chrysanthemum lasts for weeks indoors



The button type comprises flowers as small as a half inch in diameter, borne many on a stem



Set plants out now, so that you will have cut flowers when these are very scarce

tance apart and very widely scattered.

These chrysanthemums are particularly useful for cut flowers, as they last for weeks and mass together in flower jars in very attractive ways. They are especially good for use in wall vases, on the background of a plain wall covering.

The varieties vary greatly in size; the smallest are the tiny flowers of the button type and the largest the well-developed flowers of the aster type. Between these extremes are various intermediate sizes. There is also much variation in the height of the plants; some are dwarf forms, excellent for bedding; others are very tall, excellent for the back part of the border, while the majority are intermediate, reaching a height of from two to three feet.

At the Chrysanthemum Show in New York last autumn the splendid exhibits of pompons attracted much attention. Judging by appearances alone the following varieties were among the best shown:

Baby: Button; golden yellow.

Bedouin: Small; mixture of garnet and white.

Julia Lagravere: Large; rich maroon.

Mrs. Snyder: Large; rich yellow.

Nellie Rainsford: Small; orange salmon, tipped red.

Prince Victor: Large; brownish red.

Soeur Melaine: Large; pure white.

Sunset: Medium; single, reddish brown.

Yellow Gem: Medium.

Mary Keyes: White, daisy-like.

Baby Marguerite: Button; white on a stem.

Savannah: Button; brilliant yellow.

Golden Mademoiselle Martha: Small; clear, orange yellow.



In the garden plant your chrysanthemums in a mass rather than as individual plants

There is much variation in the variety lists of the different catalogues. A few standard storts are listed in all or nearly all, but to a large extent each list is different from the others. There are probably many synonyms.

The hardy chrysanthemums can be bought in the form of well-rooted young plants from all the more important nurserymen. They are usually quoted at from ten to twenty-five cents apiece. In a rich soil and with other conditions favorable the plants spread rapidly from the crown, so that in two or three years a single specimen will form a cluster that can be readily separated into many plants. They are also readily started from stem cuttings.

The bed for these chrysanthemums should be well prepared by deep spading and the digging in of a good amount of barnyard fertilizer. When this has been done and the surface smoothed with a rake so that the soil is in fine tilth, the young plants should be set about eighteen inches apart if there is plenty of room, but closer if necessary. They should be planted early in May and set a little deeper than they were growing before. Then the surface of the soil should be kept well tilled to conserve moisture and keep down weeds, and every thing done to bring about a good growth the first season. If the plants do not get a good start it will be worth while to pinch off the blossom buds this season, but this is usually not necessary. Vigorous young pot-grown plants raised from cuttings are the most desirable.

(*Continued on page* 384)

The Real Meaning and Use of Architectural Detail

IV. THE ENGLISH TRANSITION PERIOD OF THE SIXTEENTH CENTURY, KNOWN POPULARLY UNDER THE NAMES "TUDOR "AND" ELIZABETHAN"—A MINE OF SUGGESTION FOR LIBRARY, DINING-ROOM OR HALL

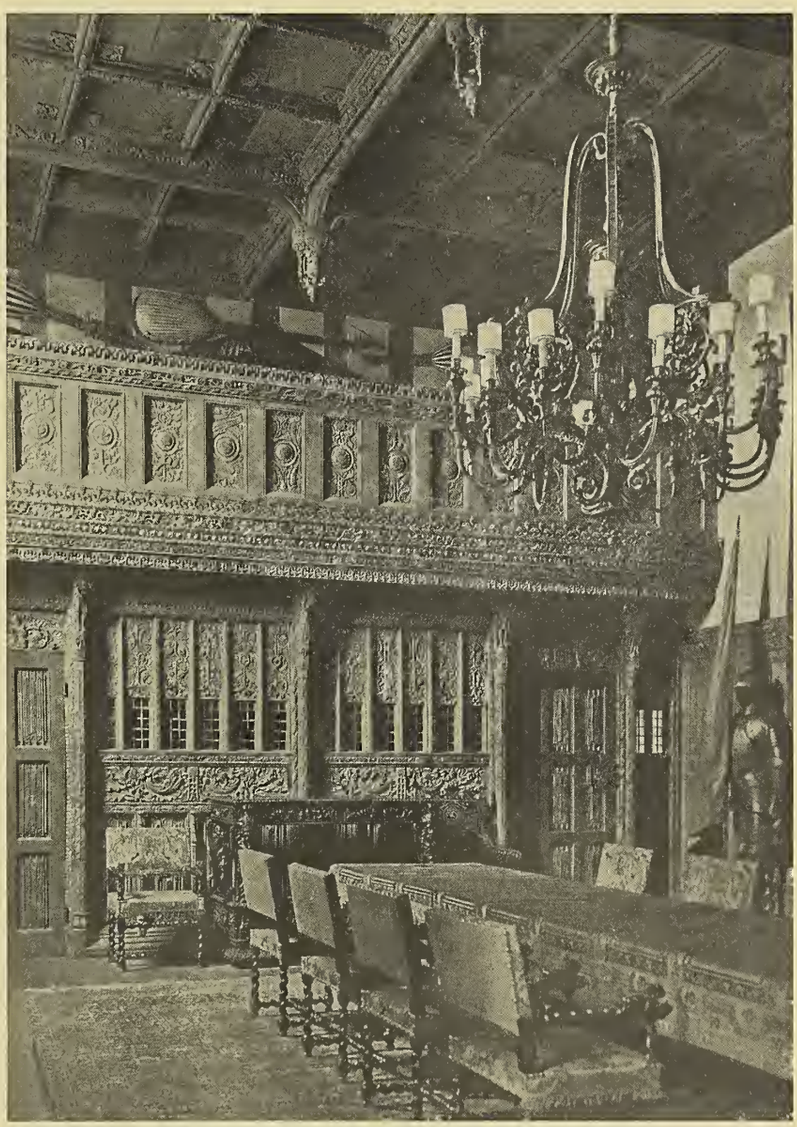
BY LOUIS BOYNTON

Illustrations from "In English Homes," by Charles Latham

[*A series of articles by prominent architects appeared in this magazine last year, outlining the characteristics of the more common architectural styles used for country houses. Another matter of great importance to those who would build consistently is the detail. Mr. Boynton's series of articles aims to explain the origin and use of motives, ornament and molding characteristics in connection with the better known styles of architecture. The articles that have appeared are: Colonial Detail, Jan., 1911; English Renaissance, Feb.; Italian Renaissance, Mar.*—EDITOR.]

IN order to arrive at an intelligent understanding of the earlier English work—the work which preceded the period of the English Renaissance—it is necessary to know something of the conditions which governed the planning and building of the country house where most of the best examples of ornament are to be found.

Until at least as late as the middle of the sixteenth century such houses were built for defense. While their purpose was not primarily military, it was nevertheless necessary to arrange them so that they might be easily protected from surprise or injury. In such an atmosphere of unrest it is easy to see how the furnishings would naturally partake of the character of camp equipage, and in fact the bulk of the property, apart from the buildings and the absolutely indispensable furniture, consisted of things which were easily portable. It was only by slow degrees that the open court and the H plan was adopted and came at length to be the typical arrangement; and so the development of the English country house from the fortified feudal stronghold was a gradual process. The English people were very tenacious of their customs and habits and did not give way to new fashions readily, nor did they change their mode of living until new conditions arose which made the adoption of such change logical and in fact inevitable.



The Banqueting Hall, Hever Castle. At the entrance end of these great halls were the screens, usually richly decorated; the musicians' gallery is over the vestibule and passage space thus enclosed

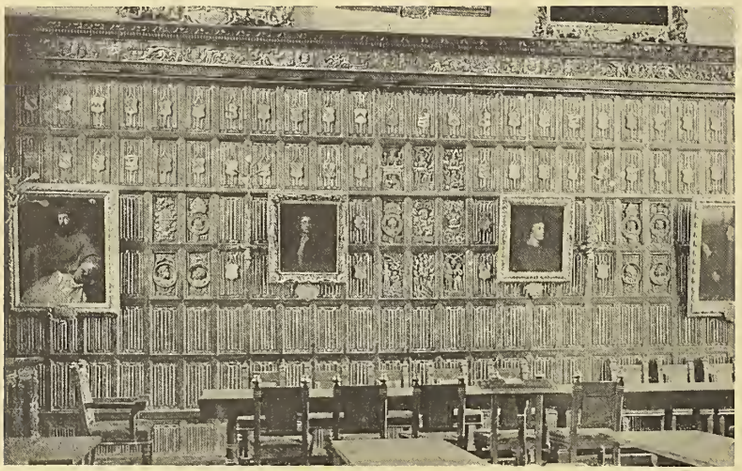
The period of this development or transition from the late perpendicular Gothic work to the first examples of the true Renaissance was almost exactly comprised in the sixteenth century: in other words, from the accession of Henry VIII to the beginning of the reign of Charles I. It is commonly known under the names "Tudor" and "Elizabethan," the Tudor being the early work, when the Gothic influence predominated, and the Elizabethan covering the later half of the century when Renaissance detail was more in evidence.

As has been said, the English manor house of the late Gothic period was a fortified, or at least easily defended, group of buildings. The great hall was the center of the life, both of the family and the retainers. This hall had a conventional arrangement which was seldom varied. It was lighted from both sides—with the entrance at one end through a screened off passage and with the dais at the opposite end. The house spread out from both ends of this hall, which divided it into two parts. As the hall extended to the roof there were necessarily stairways at each end to reach the upper stories.

Even in the more elaborate houses up to the time of Elizabeth, there was little furniture and practically no fixed or built-in decoration except in the screens at the entrance end of the hall and, rarely, in the fireplaces.

There are complete inventories of the furnishings of some of these houses where there was an abundance of rich plate, with hangings and "fedderbeddes," and wall hangings—but practically no mention of carvings or furniture. In fact, most of their possessions, apart from what was built into the houses, seems to have been of the easily portable kind, and they relied on arras, or tapestry hangings, for covering the bare masonry walls.

The earliest use of wainscot was in the ecclesiastical buildings and as it was designed to take the place of hangings, it was treated very simply and was commonly made up of a great many small



Paneling in the Hall of Magdalena College, Oxford, showing the richness obtained by the use of the linen-fold and heraldic motives

panels. The primary intention was to cover the surface rather than to decorate it, and what decoration there was, was achieved by elaborating the surface of these panels. Occasionally the shape of the panels was varied by the use of arched forms, and the arches were decorated, but even then the general effect was of a monotonous succession of rather small panels. The effect of this treatment was charming and the writer knows no more interesting rooms than some where simple paneling is carried up to the ceiling, and framed pictures and sconces, embroidery, etc., are hung over the wainscot without regard to the arrangement of the panels, which are thus partly covered up.

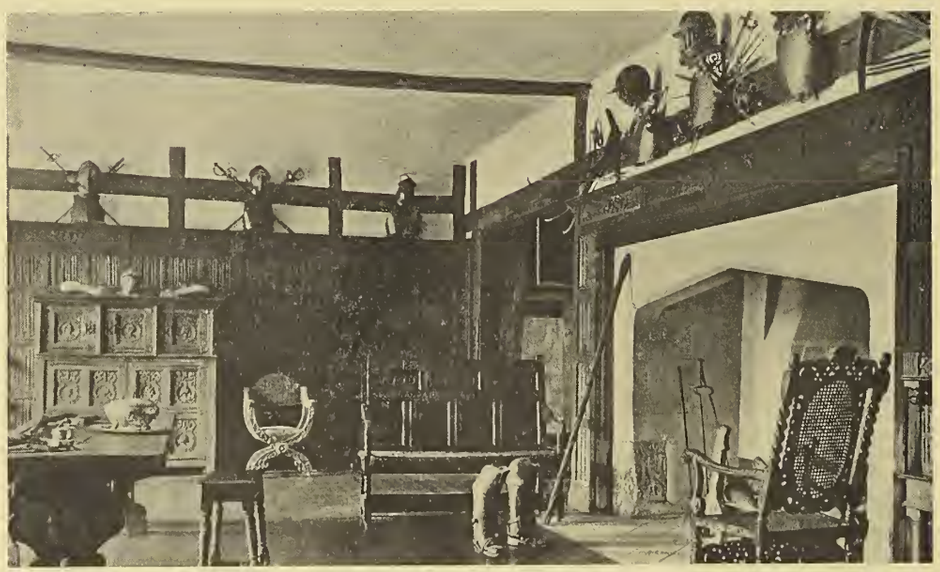
One of the most common forms used in this panel decoration was the "linen-fold," which suggests cloth or parchment arranged in vertical folds with the edges showing the convolutions of the material. There are several variations of this treatment, as in the charming, almost modern, interior at Rothamsted. Here the vertical lines in the panels are preserved, but in other respects the detail is quite differently handled. This room is curiously similar to some of the modern "Craftsman" work, *but* with a saving sense of the value of well designed, well placed ornaments.

The quality of what is called "all-over" decoration—the covering of a surface with a pattern that repeats monotonously, which is so evident in the wainscoting, was characteristic of a great deal of the decoration of this period.

The screens at the end of the banqueting halls were usually richly decorated, as was the front of the musicians' gallery which was placed above. These screens formed a sort of vestibule, with the entrance door at one end of the space which they cut off from the large hall. This vestibule was also used as a sort of serving-room and generally communicated directly with the kitchen.

There is at least one house where the chapel intervened between this space and the kitchen, and where the passage connecting them was through the end of the chapel opposite the altar—a curious commentary on their feeling for the sacredness of the place.

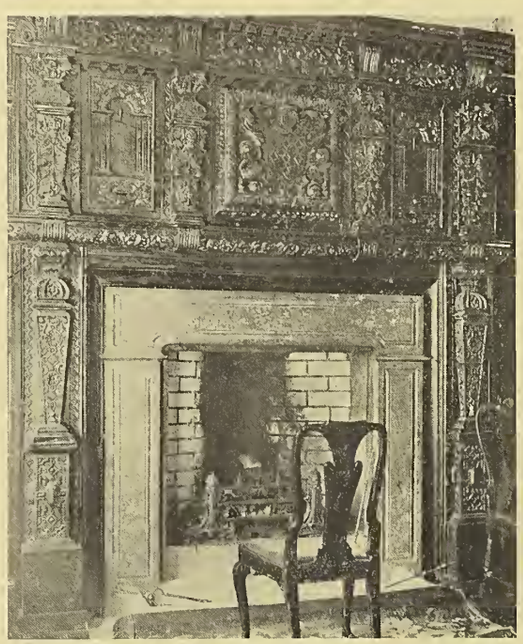
Much of the ornament of this period was derived directly from the Flemish. During the persecutions of the Duke of Alva a great many capable craftsmen fled to Protestant England, and their work fitted well with the late Gothic work of that country. Such a screen as the one at Hever Castle shows the Flemish influence, and the Italian Renaissance forms used here had evidently been translated first into Dutch.



Rothamsted, the Old Hall—a room that in its woodwork is somewhat similar to modern "craftsman" work, but with a saving sense of the value of good ornament

The use of medallions in the panels with Renaissance forms was common at this time, and they frequently enclosed a head in profile. This motive was of course imported direct from Italy, but it suffered many changes into forms that were both weird and strange as Italian ornament; but which, nevertheless were often very full of charm.

In the lower part of this screen at Hever the character of the carving is distinctly Flemish. The sense of the shape of the individual pieces of wood is strongly preserved and one feels the craftsman making the very best use that his capacity allowed of the material at his command.



The dining-room fireplace at Baddesley Clinton—typical in its elaborate carving and the absence of a mantel shelf

The Jacobean mantel is a very characteristically individual development of this period. At Baddesley Clinton the dining-room fireplace is a very fine example of the decoration in use at this time. The stone facing is usually even simpler than in this case, but the general arrangement is typical. The opening was surrounded by a simple stone facing and at both sides, and above was placed an elaborately carved wood mantel, *without* a shelf and with heraldic devices in the panels above.

The supports at the sides with the curiously bulging form and covered with strap work, the flat arches in the panels at the side of the center panel which contains the coat of arms, the

carving in the frieze and the use of consoles—in fact the whole mantel is a remarkably good example of this work at its best. This has the characteristic English domestic quality in a very marked degree. In fact this element of domesticity or as the English say "homeliness" is especially characteristic of the work of this period.

The mantel in the China Room at Holland House is another good specimen of Jacobean; except that the use of the colonnettes in the over-mantel suggests a later period, and certainly seems out of character. The stone facing is better than in the preceding example and has the simple, direct treatment that is so charming in this work.

The designers of this period were very sparing in the use of detail on the exteriors of buildings. Usually the entrance door was made a special feature and had some well placed ornament above it. This was often heraldic and the composition included a window or windows over the door. The door at Blicking Hall, seen at the end of the bridge over the ancient moat, is a particularly fine example of this treatment. The use of columns on either side of the door was quite usual. They were commonly employed in a purely decorative way and did not even pretend to support any weight.



St. Donats, the dining-room. When plaster came to be used for ceiling decoration it followed stone vaulting of Gothic work



On the exterior of the houses the entrance was usually made a focal point by the use of ornament, and made more imposing by tying it in with a window group above



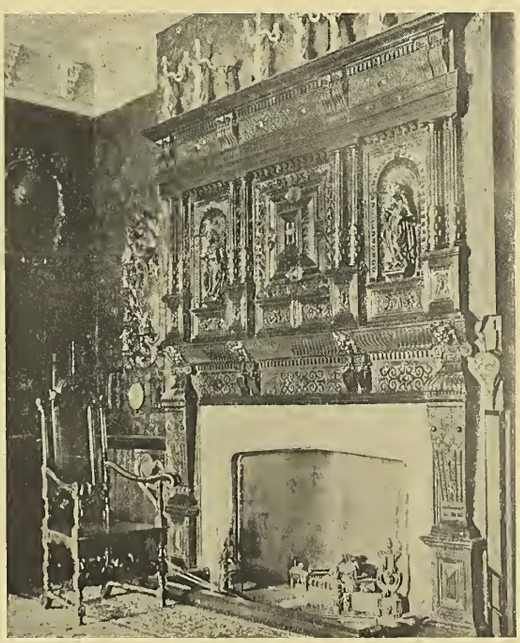
Blicking Hall. Here the plaster ceiling shows the strap-work influence in the panels; the latter are filled with allegorical subjects

There is much that is interesting in the decorative plaster work of this period. In Gothic work the rooms were either vaulted or the ceiling beams were allowed to show. These were covered with heavy planking to form the floor of the room above, and this showed in the ceiling in the simpler work or was paneled in more elaborate rooms—as in the Banqueting Room at Hever Castle. When, however, plaster came to be used, they soon realized its possibilities as a medium for decoration. The earlier work recalls the detail of the elaborate fan vaulting of the late Gothic, even to the form of the ribs, although these were of a much smaller scale than was used in stone vaulting. An excellent example of this kind of plaster work is the ceiling of the dining-room at St. Donats Castle, which is also a fine type of an English interior. In later work there is more of the character of wood carving in the plaster work and more elaboration, without, I think, a corresponding increase in charm.

The Long Gallery at Blicking Hall shows the flat strap-work influence in the ceiling, and the ornament is composed of allegorical subjects with conventional ornament on the ribs and in some of the panels. This is a fine interior save for the Victorian "Gothic" bookcases between the windows.

This whole period from the late Gothic until the completed Renaissance is one of transition. In the Gothic work, especially in the detail, craftsmanship and individual initiative were supreme. That is to say, the training and traditions of the craftsman determined the general character, but the exact form and expression of the ornament were the result of the skill and invention of the workman. This was gradually modified as the Renaissance influence became stronger, until at last the designer dominated the detail. The greater coördination of classic design and the fact that the ornament was an integral part in the expression of an idea, made it necessary for one mind to determine the exact relation between the parts and the whole. In the perfect classic form every bit of ornament and detail has an exact relation to the whole design, while in the earlier transition work the relations were more or less fortuitous.

There is a great charm in the results of the earlier work. It has freshness and variety and initiative. Above all it tends to produce the ideal domestic interior, as contrasted with the more formal work of the Renaissance, and it is this quality which makes it so peculiarly appropriate as a treatment for modern rooms of domestic character.



China Room, Holland House. Another typical example of the Jacobean fireplace, excepting the incongruous colonnettes

Grow Your Own Fruit

IV. STRAWBERRIES AND GRAPES—THE WHOLE MATTER OF SELECTING VARIETIES, SETTING OUT PLANTS, CULTIVATION, AND WAR AGAINST THEIR ENEMIES



BY F. F. ROCKWELL

Photographs by Nathan R. Graves

ARE you one of the thousands who, while possessing at home a garden plot with a nice sunny exposure, still annually consent to pay fifteen to twenty-five cents a quart for half ripe or over ripe berries. Do you realize that strawberries may be grown readily in any good sunny garden and that the twenty-five cents you pay for a box of extra early, extra bitter berries will actually buy twenty-five strawberry plants; and that these plants with their runners set out and well cared for will produce easily half a quart each next season? But that is not the whole story. You can grow better berries than you can buy, because the quality is never perfect unless the berries are ripened on the vines and fresh gathered.

The two great deterrents to home strawberry growing are not any difficulties met in growing the plants; they are, first, lack of definite information on the subject, and, secondly, the necessity of waiting until the following season for a crop. It is so hard to make any of our own plans reach beyond the usual annual circle.

With the price of layer plants of the best varieties so low, it will hardly pay to get plants of some unknown sort from a neighbor's bed, but getting the plants near at hand has one advantage; they should be kept out of the soil but a few hours. However, if you have your bed ready, the plants from the seedsman or nurseryman will not suffer, because they will be (or should be) carefully packed to keep the roots moist. In either case be prepared to get the plants into the ground as soon as they come into your possession.

It has been said that strawberries can be grown in any soil. It is true, that at least some varieties will do well in almost every soil, but good rich sandy loam, with a southern exposure, protected on the north is the best if early berries are desired. A northern exposure is more suitable for the late varieties. In either case, the situation should be open and airy. These are two requirements, deep soil and thorough draining, if the largest, finest berries are wanted; both may be had at little expense for such a small area as will be required in the home garden.

In addition, the soil must be thoroughly prepared. This is even more important with strawberries than with most garden crops. Unless the ground is in excellent condition, cross plow and subsoil plow should be used and then thoroughly fined and harrowed.

Manure, too, is important. Old, fine mixed, yard manure will be the best thing to get, or a manure compost, well rotted up. If not enough manure can be got, supplement with chemical fertilizers—the best combination being ground bone, acid phosphate and muriate of potash in equal proportions and at the rate of five pounds per square rod. Whether manure or fertilizer is used, supplement with light dressings of nitrate of soda, (1) just after setting, (2) in August or September of each season's growth and (3) soon after the blossoms open in spring.

The young plants, or runners, for new beds are usually set out in the spring—April or first part of May—and on the whole this is more satisfactory than autumn setting. For the pot-layered system described later, early autumn setting is necessary. The spring weather is more likely to be favorable to rapid new growth and the "layers" that have wintered over are all well hardened and ripened and in better shape to stand the disturbance incidental to transplanting. When setting out runners from one's own bed, so that the plants need be out of the soil only a short time, fall planting need not be disadvantageous if a favorable day and time can be chosen.

Before setting, the plants should be put in shape by removing all dead or broken and large leaves and trimming back the roots about one-half. This gives a nice stocky, stubby little plant that can be "set" nicely. If your plants have been shipped from a distance the roots may have been "puddled" or dipped in clay mud, to keep them moist. If so, rinse them off in water and trim before planting. The actual operation of setting the plant in the soil is one of the most important in the whole culture of the strawberry. It is best to do this work on a cloudy day or late in the afternoon. If only a few rows are being set, they may of course easily be watered and shaded. The soil should be so well prepared that it will not be necessary to use a dibble, as the roots should be spread out. Do not cover the crown. Set the roots in as deep as is necessary to cover all the roots, but not



Proper mulching of the strawberry bed is probably the most important element in success. Use salt or meadow hay, preferably

deeper. Set them in firm—if the soil is dry press into place with the balls of the feet, placed either side of the newly set plants.

There are two types of layers: those rooted automatically in the soil of the bed, and pot-layers. These latter are got by sinking two or three inch pots into the soil and filling level and holding a rooting runner in place over each with a small stone, so that the roots will be confined within the pot. These, of course stand transplanting more readily than the ordinary layers, especially in summer or autumn.



Marshall, a standard main-crop variety

There are two ways of setting the plants suited to the home garden, where the best in quality as well as in yield should always be aimed at. The first is the hill system. The plants are set in rows about a foot apart. The rows may be single, or four or five together in a bed, the rows a foot apart, with a two foot alley between the beds. In this case all runners are pinched off as soon as they start and the ground hoed between the hills. Where only a few plants are grown and the soil is rich and may be watered, this method will probably give the best satisfaction. The second is the "matted row" system. The plants are set, twelve inches apart in rows about three feet apart. As the runners start, they are rooted to a distance of six or eight inches on each side of the row and then turned along it. This gives a neat, narrow row, twelve to sixteen inches wide. These new plants are separated from the parent ones as soon as well established, and all other runners, from both sets of plants, kept pinched off.



Gandy, one of the best late varieties

There are also two system of growing the berries as well as two of setting the plants; the annual, by which only one crop of berries is taken before the plants are discarded, and the biennial. The latter may be used with either the hill or the matted row system, but in either case the first crop will be the best if not the biggest, and the beds must be kept clean. For the annual system, pot-layered plants and the hill system of growing are used and maximum quality and quantity of crop attained. This system is as follows: as soon as the plants are through fruiting or by setting aside for propagation purposes a few plants, not permitted to fruit, get new plants by the pot-layering method. As soon as possible after the middle of July, set these in the new bed, which must be rich and thoroughly prepared and give them clean frequent cultivation until the fall. Pinch off all runners as fast as they appear. The idea is to make a strong quick growth and concentrate it all in the newly set crowns, thus assuring a full crop of the very best fruit for the following spring. The advantages of this system are, that there is a full crop every year, instead of only two in three years. After the old bed is plowed down for a late vegetable crop, there is time for an early one, lettuce, peas, beets, etc., before the new bed is set. It also means the very best quality and size of fruit.

Whatever methods of planting and growing are used, the beds must be kept clean and frequently cultivated. A wheel hoe and a small "onion" hoe for use between the plants are the handiest tools to use. For a month or two after setting the plants—work the ground rather deeply, but as the new roots begin to form and spread, restrict it to an inch or two in depth. It is particularly important to maintain the soil mulch in dry weather, by frequent stirring of the soil.

The purpose of mulching the strawberry bed is five fold. It gives winter protection; holds the plants from starting prematurely in the spring; keeps the berries clean; retains the soil moisture; and keeps the weeds down. So it pays to do it well. Salt or meadow hay is the ideal material to use, but if it cannot be had, other cheap hay, straw or even leaves will answer. Cover both beds and walls to a depth of two or three inches, before severe frosts. Hold in place, if necessary, with boards or plank. Leave on until growth starts in the spring and then pull aside from each plant to let the leaves and flower stalks up through. Keep as evenly and compactly about the plants as possible, to mulch the soil and to protect the fruit.

The strawberry is comparatively free from serious injury by disease, "rust" or blighting of the leaves being the most troublesome. Where clean culture is given, and the beds kept down only one or two years at a time, it is most unlikely to prove troublesome. Sometimes also they are attacked by mildew. Both troubles are controlled by spraying with Bordeaux. Make first application soon after plants are set and three or four times before fall, and just before blossoming, following ten days later in the spring.

Among the insect enemies, the White Grub (larva of the June bug) is the most troublesome. Dig out and destroy. Do not follow grass or sod directly with strawberries. The strawberry worm, a small green caterpillar, sometimes proves annoying, when in large quantities. Dust the foliage, while moist, with finely sifted ashes or with lime. If cut-worms cause any trouble, dig up and destroy and catch with sweetened bran mash sprayed with Paris green.

In selecting varieties of strawberries, care must be taken, if the "imperfect" flavored sorts are planted, to have a row of some "perfect" flowering sort every six to nine feet. The following are all good, high quality berries, that are successfully grown over a wide range of soil and climate: (Early) Haverland, Michel's Early, Warfield, Bubach No. 5, Glen Mary, Brandywine, Marshall, Nick, Ohmer and Sample. (Late) Commonwealth, Gandy.

The Grape

There may be some excuse for your not growing your own fruits, if your space is limited, but you cannot use this excuse about grapes. The classical fig-tree may not be adapted to your particular climate but by all means have your own vine:—if there is not room for a trellis in the garden, train it against a wall of the house, wagon shed or garage.

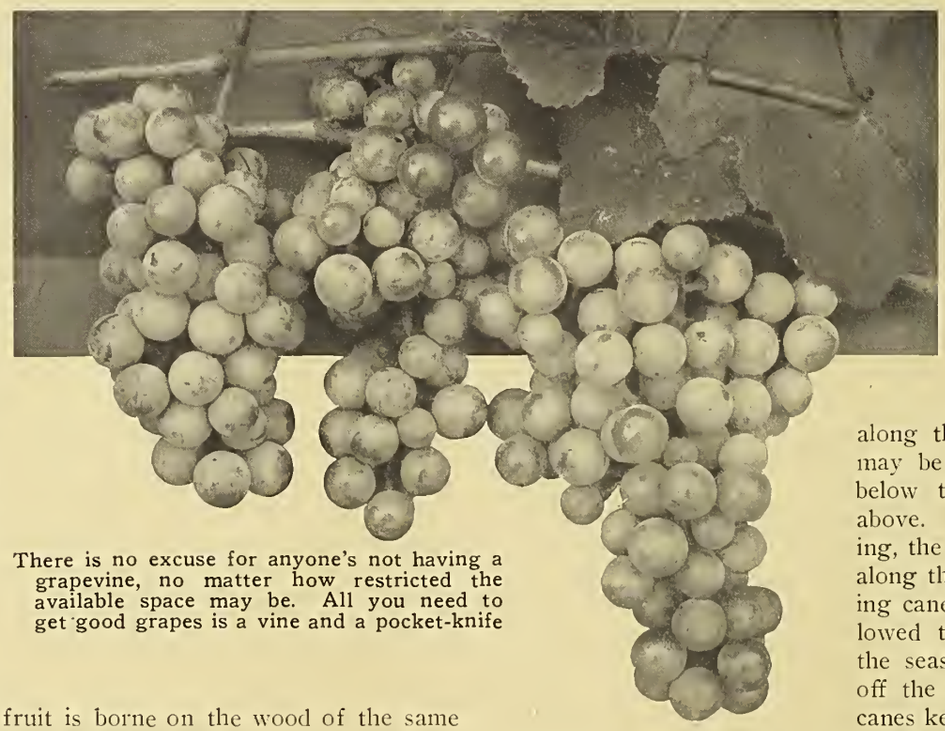


Haverland, a tried-and-true early variety

The grape is not particular as to soil, as long as it is well drained. I have seen them thriving on soil so gravelly that it would seem nothing could grow there. If it can be had, a soil rather of clay composition will be best. The exposure should be to the sun, and if possible an open, airy one. If the soil is not already in good condition, and well enriched, prepare it thoroughly in both these respects before you plant. Stable manure will be good to use, provided it is well rotted up, but a liberal dressing of wood ashes should be added to supply potash, as it is necessary to have the wood thoroughly ripen and harden by fall, for upon this depends the crop of the following year. If using chemicals, take equal parts of bone, acid phosphate and muriate of potash, with a light top dressing of nitrate of soda, early in the spring

This will give the plants a quick start but will not continue to act long enough to prevent the ripening of the wood.

In planting, which may be done in either fall or spring, preferably in spring, either one or two years old plants may be used They should not cost more than fifty cents each. Before planting cut back the top to three or four "buds" or eyes, and shorten back the roots a third or more, cutting out any that may be bruised. Make the hole large enough so that the roots need not be at all cramped together. Let them spread out and firm the soil in about them with the fingers, and after the hole is filled in, making the planting firm by pressing about it with your full weight on the ball of the foot. If the soil and season are dry, water thoroughly about the roots, before filling in the hole. A mulch of meadow hay, sawdust, coarse manure or other litter, for two or three feet about the stem of the vine, will help save the moisture.



There is no excuse for anyone's not having a grapevine, no matter how restricted the available space may be. All you need to get good grapes is a vine and a pocket-knife

Pruning is the all important factor in growing good grapes. Upon the correctness and regularity with which it is attended to, the certainty, size and quality of the crop will depend almost entirely. Give special attention then in trying to master the theory of grape pruning. In order to do this, it is necessary to keep in mind two facts, as follows:—

First Principle.—The fruit is borne on the wood of the same season, which grows from last season's wood.

Second Principle.—Each vine can properly nourish and ripen only a limited number of bunches. This number may vary between twenty-five and one hundred, but it will be much better to keep it between forty and eighty. The number to be left should be determined by the condition of the vine and by the previous year's work.

The system of pruning, then, should be as follows:—

(1) At time of planting, cut back three or four eyes.

(2) When the buds sprout, rub off all but the one or two strongest. Tie or stake up the "canes" growing from these.

(3) In January or February of the following spring, cut the strongest cane on each vine back to three or four buds, and remove entirely all others.

(4) In May or June, after growth has begun, rub off all buds but two on each cane. The two new canes should be tied securely, not tightly to stake or trellis. They form the basis from which in the following seasons will spring the canes that bear fruit.

(5) During the season, keep all canes that start, other than the two desired, rubbed off.

(6) In January or February of the second spring, cut back the two main arms, left to grow the preceding year, to eight or ten buds each. All the new canes springing from these are left, and will bear on an average of two bunches each, of fine large fruit.

(7) The following January or February, cut off all of previous year's growth except the three or four canes nearest the head of the trunk and cut these back to eight to ten buds each. These buds will, of course, furnish the fruiting canes for the third season.

(8) Every spring in January and February, cut back all wood except three or four canes to eight to ten buds, which will furnish fruiting canes for that season.

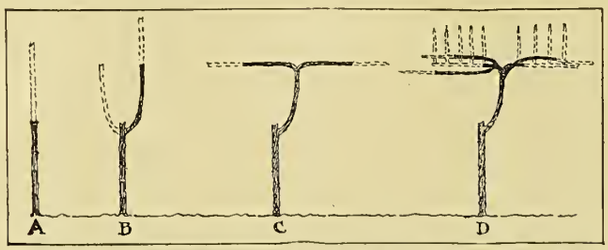
The training of the vines does not make so much difference. Poles, trellises, arbors, walls,—almost any sort of support may be utilized that permits of easy pruning. For just plain results in fruit, the amateur cannot do better than to train his grapes to the following modified form of the Kniffin system. A single stout wire is stretched about six feet above the row, in which the young vines are set about six feet apart. The main cane, or trunk of the vine is supported to this and the two, three or four "arms" left, are tied along this, or to a wire which may be stretched a foot or so below the top wire mentioned above. After the spring pruning, the remaining arms are tied along the support and the fruiting canes, as they grow, are allowed to hang down. During the season the buds are rubbed off the trunk and the hanging canes kept untangled.

In growing on walls or arbors, it may not be possible to adhere strictly to the system of pruning above outlined, but the principle can be kept in mind, and all wood two or three years old cut out, except the main trunk and laterals.

If too many bunches set, thin out, especially where any touch. If the grapes do not seem to be ripening up evenly in the fall, it means that the vine is attempting to carry too heavy a load. Thin out one-third or half the bunches and give a dressing of ashes or muriate of potash. Next year cut out to the proper number of bunches, both by pruning in spring and by cutting out bunches as soon as the fruit is well set. An over loaded vine means not only poor fruit this season but unripened wood and weakened vitality, with consequent poor results for next season.

Of the several grape troubles the only one likely to prove serious, where the vines are well pruned and cultivated, is the "black rot" of the fruit which frequently, if neglected, will cause almost a total failure. It may be successfully fought, however, by the following simple means. First, cleanliness. When pruning, remove all the old dried grapes or "mummies" that may cling to the vine and carefully rake up all old leaves, twigs, mummies and other refuse under the vines and burn. Keep the ground clean from weeds and grass during the growing season and keep the vines themselves

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Dotted portions should be cut back:—A, when setting; B, the next winter; C, a year later; D, third winter and after. Horizontal branches may be trained on wire

Some Edging Plants Worth Trying

PLANTS OTHER THAN THE COMMON CANDYTUFT OR SWEET ALYSSUM—A FEW PRINCIPLES THAT SHOULD GOVERN THE FORM AND COLOR OF EDGINGS

BY IDA D. BENNETT



Candytuft, which with sweet alyssum is one of the commonest white edging plants

IT is always a matter of economy in gardening to make use of low-growing plants as edgings to beds of taller, more important growths. This not only makes for economy in the use of space, but also fills out an otherwise uninteresting hiatus between the point where the taller growths cease and the edge of the grass begins, besides covering the more or less ungraceful lower part of the plants.

Often very effective color combinations are produced by the use of a brilliant-flowered edging plant in harmony with, or in striking contrast to, the central motif of the beds. Beds of bright scarlet flowers, for instance, are greatly heightened in brilliancy by a border of white, and beds of soft pinks and rose can be made lovely with edgings of lavender of a rosy shade, while yellow best sets off a bed of blue flowers. A bed either of strong-colored larkspurs, or blue lupins is beautiful when contrasted with a border of yellow eschscholtzias.

No attempt should be made to edge beds filled with recumbent or trailing plants, as such an effort would simply result in a general mixup. But any plant which grows erect and is not specially symmetrical from the ground up will be improved by the presence of a small plant about its feet.

One of the prettiest plants for a planting in partial shade is the lobelia—either the Crystal Palace, Compacta, Heterophilla, Major, Prima Donna or White Gem, which offer a choice of a blue, crimson or white flower. Usually the blue forms will be preferred and the Crystal Palace will be found very satisfactory. Lobelias are very easily raised from seed and as the seedsmen are usually very generous with it, a single packet will furnish sufficient plants for edging several beds.

The ageratum is another easily raised plant, and seed sown in boxes in the house or in the hotbed in April will come into bloom in June. One must be sure, however, to secure the seed of the dwarf varieties as the taller-growing varieties are very straggling and unsatisfactory. Little Blue Star is the most dwarf of all, rarely exceeding four or five inches in height and producing very freely great quantities of bright blue flowers. Cope's Pet is a fine, light blue, very desirable, but the white ageratums are seldom satisfactory, as the color is not clear and discolors in the sun. Ageratums will do well in almost any soil or situation.

Sweet alyssum is always popular and makes a lovely edging where a trailing or creeping plant can be used. It is a rapid grower and is inclined to get beyond bounds, which is the worst that can be said of it. It is lovely for a border around a lily-pool and for the rockwork. Seed should be sown where the plants are to remain as they do not bear transplanting well and are apt to be lost if moved from one place to another.



Tiarella—the native foam flower—gives an eight-inch height of its bloom in May and June

One of the prettiest edging plants is the Bellis or English Daisy. It will grow anywhere, in sun or in shade, and any soil seems to suit it. It may be readily grown from seed and may be increased by root division, but as it self-sows freely one is apt to have an embarrassment of riches in a season or two. All single-flowering plants should be discarded as soon as they identify themselves, and all double forms showing a yellow eye and flowers double to the center retained; in this way one preserves the quality of the flowers and secures an edging that is uniform in effect.



Sweet alyssum is the most popular of all, blooming steadily until after frost. Use flower edgings for flower beds, foliage edgings for non-flowering groups

Drummond's phlox is always a substantial asset in the garden. The manner of growth and height of the plants is desirable, and the richness and variety of the colors make it especially sought after; it is possible to find a color in this flower that will harmonize or contrast favorably with almost any color scheme. For beds of blue flowers there is a most attractive buff or white. For scarlet flowers the phlox offers the most brilliant of scarlets, and for dark red flowers there is a deep rich red phlox. Seed may be sown in the open ground in May or, for earlier bloom, in the hotbed or flats in the house. Transplant when danger of frost is past to the permanent location. They are

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Bacteria as the Gardener's Allies

THE THEORY AND PRACTICE OF INOCULATING SEED OF THE POD-BEARING PLANT WITH BACTERIA THAT HELP THEM TO DRAW NITROGEN FROM THE AIR

BY KATHARINE NEWBOLD BIRDSALL

THE home gardener, as well as the farmer, has cause to thank the scientists who have been experimenting with the question of fertilizing seeds before planting, as against the old method of fertilizing the soil in which the seeds are sown. Is it not a simple matter to buy one's fertilizer in a small bottle in the form of jelly, add a little sugar and water, shake the bottle thoroughly to dissolve the jelly, and pour the liquid into a bowl in which the seeds have previously been placed? The seeds need only to be moistened with this solution, which contains a certain bacteria, to inoculate them with the power to form nodules on their roots which absorb nitrogen from the air and feed it to the plants. Surely this is a much more simple process than the purchase of fertilizers which must be worked into the ground. The one drawback to this great scheme is that it directly benefits only the legumes—the pod-bearing plants such as peas, beans, sweet peas, alfalfa, peanuts, etc. Indirectly, however, it benefits other crops as well, for while these do not form nodules on their roots they seem to thrive better in soil that has grown inoculated legumes.

A bacterium, the scientists tell us, is "the smallest of the microscopic organisms"—the smallest of the vegetable organisms, composed of but a single cell, which can move and propagate itself.

The work of the beneficial bacteria, which interest us for our gardens, is that of supplying to certain plants the most necessary element of plant life, nitrogen. Nitrogen, as many of us have learned, is one of the essential constituent parts of the elementary material which composes plant and animal life. It is a necessary ingredient in foods for animal and for plant life. Most plants absorb it through the soil and furnish it in food for animals. When living things die or secretions decompose, some of their nitrogen, largely in the form of ammonia, is reduced to nitrates by bacteria and is then food for plants. Hence we fertilize our soil with decomposed matter in order to enrich it with nitrogen which shall be absorbed by the seeds and roots.



Root of a pea vine showing the nodules instrumental in extracting nitrogen from the air

One function of certain bacteria is to decompose substances which, if allowed to collect, would fill the whole earth with dead animals and plants. If it were not for these bacteria, dead animal and plant bodies would remain as fixed as rocks; dead trees, plants, animal and human bodies would cover everything. Nature has provided bacteria to decompose these bodies as soon as life ceases, resolving them into their original simple chemical elements. This decomposition is prevented by man when he quiets the bacteria by preserving meats and vegetables. Ice also quiets the bacteria for they must have comparative warmth to become active and to grow.

There is plenty of nitrogen in the atmosphere for all animals and plants. The question is, how shall we get it? Man absorbs it in certain foods. Foods absorb it through fertilizers. The population of the earth is fast increasing; the supply of fertilizers is not increasing and is insufficient for the foodstuffs.

As the atmosphere is four-fifths nitrogen, it stands to reason for economy that we should get our nitrogen fertilizer direct from the air. It is an elusive element, but the scientists have caught or "fixed" it by a simple process, with the aid of nature. They encourage the plants themselves to do the work of gathering the bacteria, which in turn help the plant to gather nitrogen from the atmosphere, and store it for plant use.

Bacteria are much too small to be seen by the naked eye. A pin head will hold thousands of them. There is no way exactly to count them, and they multiply with marvelous rapidity. Each bacterium will divide itself and then divide again and again into myriads of new bacteria; this process is called "fission."

The certain plants upon which nitrogen-gathering bacteria thrive are legumes, comprising most of the pod-bearing plants. The method of securing the bacteria for farm and garden use has recently been perfected and is now within the reach of everyone—a wonderful piece of work when we consider that there are thousands of different kinds of bacteria in the soil, and unless we have the righ kind for the crop we wish to plant, they will do no good. Each kind of legume has its own particular kind of bacteria.

The bacteria settle in groups on the rootlets of most pod-bearing plants, peas, beans, lentils, clover, etc. They can easily be seen by the naked eye when grouped in colonies in little knots or lumps called "nodules" which grow on the rootlets of the healthy plants. These bacteria are nitrogen-gathering and have a store of nutriment to feed to the plants. This being established as a fact, scientists had but to gather the bacteria and inoculate other plants with them, so that new nodules form on the plants, and the bacteria which increase so rapidly gather nitrogen for the new plant.

The next important question was to supply them to the farmers and gar-

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At the left a vine grown from inoculated seed showing the comparison with the ordinary kind



The homestead of the Mead family near Greenwich, Connecticut, built in 1796. It is rare indeed in America to find a house of this age still occupied by the family of its original builders, and still rarer to find its rooms furnished as consistently as the following pictures indicate

A Home of the Eighteenth Century, Today

BY ALFRED MORTON GITHENS

Photographs by Chester M. Whitney and the author

IF one has an old house or a house built in the "Colonial" or "farmhouse" style, he is naturally interested in the contemporary way of furnishing. He eagerly visits a place whose fittings have retained their old character, for from them may come a criticism or suggestion he might apply to some room of his own, and by studying many examples he gradually builds up a sense of congruity between the style and its proper furnishings. Therefore, knowing a house a hundred-odd years old, built by former members of the family that now occupies it, we felt that its interest should be shared by those who care for such things.

It is a dignified house of the Georgian period with little or no ornamentation but with stately character in the orderly arrangement of doors and windows, porch and roof-lines. It stands much as it did when first constructed, though the spruce trees planted to break the northwest wind are grown, and the great box-bushes crowd the Greek columns of the porch; a house that suggests Christmas or Thanksgiving day reunions; the "old homestead" of the imagination.



"The spruce trees planted to break the northwest wind are grown, and the great box-bushes crowd the Greek columns of the porch"

Much of the furniture is associated with former family life. In the early days, they say, the Franklin stove in the dining-room was considered such a scientific heating apparatus that, neglecting the other fireplaces, the household drew its Windsor chairs to face the hotter blaze; then, turning, let the heat play between the slender spindles, on



The rosewood sofa and chairs of long ago are still grouped around the fireplace. It is interesting to notice the simplicity of the mantel and the modeled iron fire-back

of the hallway; a vista wide open from room to room would have been dearly paid for by logs and close attention. The open fire was naturally the center of interest—notice in the parlour how the rosewood chairs and sofa are grouped about it; the modeled iron fire-backs were in some cases the only architectural ornaments in a room.

However, in the back-parlour it is different, for this room is used in part as a library, and the windows and table become the more important features. The pedestal of this table is particularly interesting; unfortunately it is obscured in the photograph by the dark paper behind, a visible criticism of dark wall paper in an old house; for the wall papers here are not in character. One might safely guess that the walls were formerly tinted or in sanded plaster only, and the delicate mahogany carving showed in strong silhouette. Notice the modeled legs of the china-cupboard against the white paneled wood; the silhouette of all old furniture has evidently received great attention, and perhaps the light background explains the reason, for with our dark wall paper, silhouette is not of much importance. But let him who contemplates light walls in the old manner beware of one thing: that they will exact extreme care in arranging his furniture, for each piece stands clearly forth and what was not noticeable with dark walls is a fault with light. Farmhouse walls were washed with something resembling kalsomine, and delicate shades of pink, blue and buff are common. The stair hall of a neighboring house is painted gray-white with an irregular gray stippling sug-

chilly backs and shoulders. (Under one of the chairs is pasted a label dated 1796, describing how "all kinds of Windsor Chairs and Setties" were made in New York on "Catherine Street above the Tea-Water Pump.") Doors were tight shut against the cold



A very curious piece is the tall china cupboard, holding the china and cut-glass of past generations



Originally the walls of the hall were probably finished in tinted or sanded plaster only. Papering was rarely found excepting in important formal rooms

gesting marble; another has a coat of sanded plaster mixed with a yellow ochre, so the wall is a clear pale buff. Paper printed in colors was imported from England, but rarely used and then only in the most important rooms of the more formal houses. In general it copied the frescoes of the time—Watteau shepherds and shepherdesses, landscapes, or Japanese tea-gardens. Records tell of sending to England the exact dimensions of the rooms with doors and windows and the paper being printed to order.

Of course everything from England was highly prized and though after the War of the Revolution they strenuously denied it, still English buildings and English furniture retained complete influence over everything constructed by the new nation. Perhaps we are prone to give too much credit to the esthetic taste of the day; probably the excellence of the average work was purely due to tradition. They were accustomed to the regular arrangement of windows, to roofs sloping at just a certain angle, to the delicate plaster cornices and mantels of Adam and his contemporaries; it never occurred to them to design differently. Then too, each village carpenter had one of the various handbooks on building that gave the "five orders" complete in every detail, as well as chimney-pieces and stairways with working drawings of the newels and just how to sweep the handrail around in a curve mathematically correct.

I have before me now the "Palladio Londonensis, or London Art of Building," dated 1748 and written by a certain William Salmon for "the young Practitioners." The title-page describes how it contains "plain and easy Directions for the construction of the Five Orders of Architecture with their several Pedistals, Columns, and Entablatures; and a Parallel drawn between this and Mr. Gibbs's Method and that of the Builder's Repository...A large variety of Doors... the proportion of Windows...the proportion of rooms, ceiling-pieces, &c...the several kinds of Staircases, with the various forms of their twisted Rails...," and so forth.

If it ever occurred to a builder to range four or five windows close together, or build a corner fireplace, or to commit any of the modern house's frivolities, it was doubtless frowned upon as not according to the books and therefore ignorantly "Gothick," as they expressed it.

Among the gentry a knowledge of formal, classic architecture was an essential part of a man's education. Washington and Jefferson were skilled architects and each has half-a-dozen or more extremely admirable mansions to his credit. Rigid conventionalism founded on English work of the eighteenth century produced the style called "Colonial"; probably the country builders then had as little architectural sense as they have to-day, only the buildings they saw were better and they were not further degraded by such books as are issued by unqualified "authorities." But *"revenons a nos moutons."*



Spindle-back Windsor chairs, the Franklin stove and the clock that ticket the seconds of the past century



An inlaid Hepplewhite sideboard with its silver and glass of long ago

Most of the furniture here is well worth remark—the inlaid Hepplewhite sideboard with its old cut-glass and silver, the mirrored console of the parlour with seven-branched candle-

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A front corner of the parlour, with the fine old secretary, the console table and the mirrors that were so freely and effectively used in the olden times



The dahlia reigns in the fall garden of the author, reinforced by cosmos, chrysanthemums, asters, salvia, marigolds, zinnias and calendulas

The Autumn Garden of Dahlias

A SUGGESTION IN GARDENING ECONOMICS FOR THE MAN WHO TAKES HIS FAMILY TO SHORE OR MOUNTAINS FOR THE MIDSUMMER MONTHS

BY HOBART A. WALKER

Photographs by E. S. Butterfield, N. R. Graves, E. J. Hall and Chas. Jones

THE fall garden must, by reason of its gorgeous and voluptuous splendor, appeal to all who love and appreciate nature. Then are the richest color effects seen in flowers and foliage; then is the most wonderful passage in nature's glorious symphony approaching its grand finale. Like marvelous chords of close harmony the riotous coloring dazzles and thrills its observers, leaving with them beautiful memories of the past season as well as anticipations of another harvest of glorious bloom.



Beauty of Kent. A modern show dahlia—two or more colors, striped with edges lighter than the ground color

My reason for a special study of fall gardening must necessarily appeal to many others, busy men whose city or suburban homes are vacated by their families for a period of two or three months during the summer exodus to the mountains or seashore. Under these circumstances it is obviously futile to spend time and energy on flowers which are at their best in midsummer.

I have the very early spring flowers, narcissus, crocuses, scilla, chiondoxa, etc., and later, peonies, roses, iris and lilies, but my greatest efforts are reserved for the fall garden, and the glory of the fall garden is the dahlia. This wonderful old-fashioned flower is so well known and loved that it needs no introduction from me. New varieties are being constantly introduced, and able professional gardeners are giving their entire time to its study and cultivation.

Two of the reasons for the popularity of the dahlia are its hardiness, and the fact that it does not need the constant attention required by roses and many other flowers. It is troubled very little by insects or parasites of any kind. My greatest trouble has been with grasshoppers which eat the blossoms, and they must be picked off and killed. The foliage is luxurious and of attractive shape so that the plants are an attraction in a garden before the arrival of the flowers. Of course the crowning splendor is in the blos-



The Cactus dahlia has long rays, not cupped, but sometimes with recurved margins. Vesuvius

soms, which for beauty and variety are unrivalled. Those amateurs, who have not yet become enchanted by the culture of this beautiful flower have much pleasure in store, and I hope that I may be able to give them, from an amateur's experience, a few practical ideas which may be of benefit.

Above all, in starting the dahlia garden, start right. Do not select your roots from catalogues, but if possible see the flowers first. This can easily be accomplished by visiting some such exhibition as the Dahlia Show, which is held every September at the American Institute in New York City. At this show, both amateurs and professionals exhibit a wonderful variety of blossoms, and orders may be placed for such as suit the fancy of the grower. I was fortunate in making my first selection in this way, and secured exactly the color effects I desired. These bulbs are delivered to the buyer in the early spring. At the risk of repeating information which is already known I will give briefly the program which I have carried out, and a description of some of the varieties of dahlias which I have grown satisfactorily.



Mr. Walker's "golden walk" is bordered with dwarf marigolds, tall marigolds and calendulas

There is nothing gained by starting dahlias too early. I do not plant mine until the middle of May, but about the first of May I dig trenches about a foot deep, and spread all my roots out in those trenches, sprinkling them lightly with soil. A week or ten days of this treatment causes them to swell and the sprouts to appear. In most cases one can then determine which are lifeless and to be discarded. When the eyes or shoots are easily distinguishable, the clumps can be divided into individual roots.

In planting allow at least a space of three feet between the plants—more if possible. The reasons for this are that dahlias are insatiable feeders and need all the nourishment which they can derive from the soil, and their foliage is so dense and spreading that they require a great deal of space. If they are too closely planted the sunshine would be unable to filter through to the ground.

The only fertilizer which I have used is bonemeal, and it is most effective. One attractive quality which it possesses is that it does not breed weeds as is the case very often with most barnyard or stable manure.

The holes for the roots are dug about twelve inches deep and a good trowelful of bonemeal put in. Then a couple of trowelfuls of earth, and the root laid carefully in with the sprout turned upward. After filling in the hole make a slight depression in the earth and put on top another trowelful of bonemeal. This will sufficiently enrich the earth when soaked in by rain.

The next step is to keep weeds away, which is not difficult, as the dahlias leave very little nourishment for other plants to feed on. After the plants have attained a fair growth several of the stalks may be cut out if desired. The advantage of this treatment is to secure a more dwarf growth with larger blossoms. My system is to do this with the foreground, and in the background let the plants attain a natural growth, which is often a height of seven or eight feet. They form thus a beautiful background to the garden. I use Wildfire, a most beautiful single red dahlia, and Clifford W. Bruton, a fine lemon yellow, for background effect, and have been able to cut great quantities of blossoms from them.

Unless the beginner is warned he will lose some of his best specimens by not supporting the plants properly with stakes. These stakes should be driven well into the ground and should be put in when the plants have attained a height of about three feet. Tie the plants to the stakes with heavy cord or wide bands of cloth. You will have better flowers and a greater abundance if you clip off all the first buds, and remember that you can afford to be generous with your blossoms, for the plants may be shorn of every flower twice a week, and new ones appear as if by magic.

After the leaves are turned brown by frost let the plants stay in the ground for a week or so. Then remove the roots, shaking off the earth as much as possible, store them in boxes between layers of newspapers and put away in the cellar in a dry cool place. The stalks and leaves may be left on the ground as they provide a good mulch.

There is such an endless variety of fine dahlias that it is impossible to have one specimen



Another Cactus dahlia. Anyone prejudiced against the old-fashioned dahlia has but to see these forms to be won over



The Cactus Hybrid type is also called the Decorative dahlia. The growth has here been confined to one sturdy shoot



Merry Widow, a brilliant scarlet single, with the very desirable velvety texture of petals



Another of the Cactus Hybrid or Decorative type. Few cultivated plants have such a wide range of colors



Twentieth Century, a single white, having unusually broad petals



A dahlia cut back ready for storing—showing the typical root formation

of each in a small garden. My policy has been to plant two good roots of each of the chosen varieties, so as to be fairly sure of success.

The white flowers which I have found satisfactory are the following: Yvonne Cayeux, a pure ivory white Cactus dahlia with narrow evenly curled petals; Gloria de Lyon, a white Show dahlia; Madam Heine Furtado, a beautifully formed flower, one of the best Show dahlias in existence; and Schwan, probably the most perfect white Cactus. This flower has long rigid stalks.

Some of the good red varieties are: Wildfire, one of the best Single dahlias known—the color is vivid, and it is a most prolific bloomer, forming a cloud of brilliant red blossoms in a few days after cutting; Alfred Vacey, a reddish amber tinged with pink; Ami Bethier, a light carmine Cactus; Columbia, a curious Cactus which is vermillion with petals tipped and striped with white; F. H. Chapman, orange red; William Agnew, a very beautiful and prolific red; G. W. Childs, a deep garnet with rich velvety appearance, with long twisted petals; Standard Bearer, a rich light carmine; Danish cross, a pretty and effective Single dahlia of light scarlet color striped with white.

The flowers of yellow tone which I found satisfactory are: Dainty, a lemon yellow Cactus shaded with rose pink; Clifford W. Bruton, a very beautiful lemon yellow; Goliath, a very satisfactory Cactus shaded yellow and pink; H. J. Jones, light yellow; Mrs. Hobart, pale orange and yellow beautifully blended; William Marshall, orange and yellow; Gold Medal, a very handsome Fancy dahlia of lemon yellow striped with crimson.

A very fine Decorative dahlia is Eloise, of bluish pink shaded to deep red and magenta. A hybrid of this is Uncertainty, which well deserves its name. I have had one plant produce a pure white blossom, another rose pink and another a deep magenta.

Some of the most beautiful flowers for cutting are: Mrs. Roosevelt, a large blossom of pink and white; W. W. Rawson, of similar color; Madame Van den Dael, a delicate silvery pink fading to creamy white in the center; and Madame Jeanne Charmet, one of the best decorative dahlias produced. It is a soft light pink with large flowers borne on long graceful stems.

Probably the most showy flower is the Souvenir de Gustave Duzon, which often has blossoms from six to eight inches across, the color being similar to that of the Oriental poppy, a very deep red. The stems are long and very strong. A curiosity worth growing is Viridi Flora, a perfect green flower, and another is Belle of Springfield, the blossoms of which are little pompons of rose and red—one of the smallest known dahlias.

I have found that a good method of arranging cut dahlias where the blossoms are large is to put them in hyacinth glasses, one blossom in each glass, and arrange them in a circle in the center of the table. A more gorgeous centerpiece could not be imagined, provided that harmonious colors are selected.

Finally, I can only say to those who

(*Continued on page* 386)



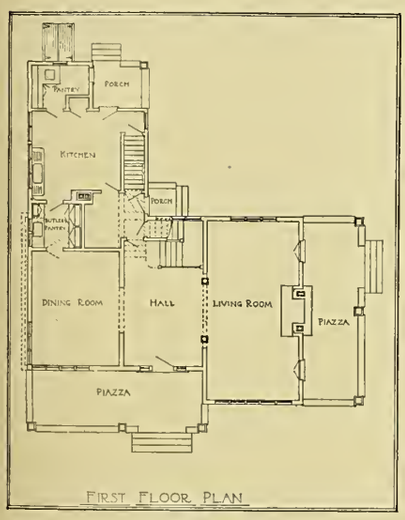
A new seedling dahlia, the Queen Queen. Can you get such a variety in form and color in any other fall flower?



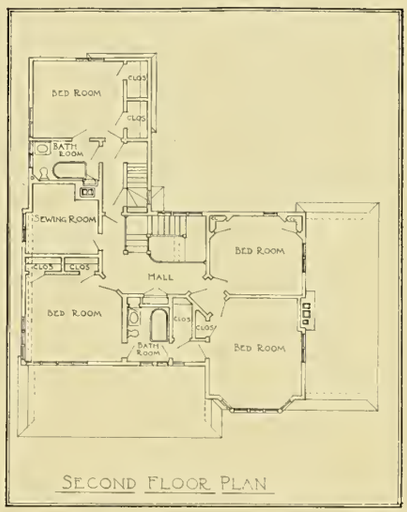
A feature that will strike the observer at once, in summer at least, is the exclusive use of casement windows. They seem to belong unmistakably with the half-timber type of house

THE HOME OF MR. RICHARD I. NEITHERCUT BRIDGEPORT CONNECTICUT

Joseph W. Northrop, architect



FIRST FLOOR PLAN



SECOND FLOOR PLAN

As the first floor plan shows, there are two porches, almost of equal size. One is the usual entrance front porch, the other which is upon the side secures the greater privacy of the lawn and the garden

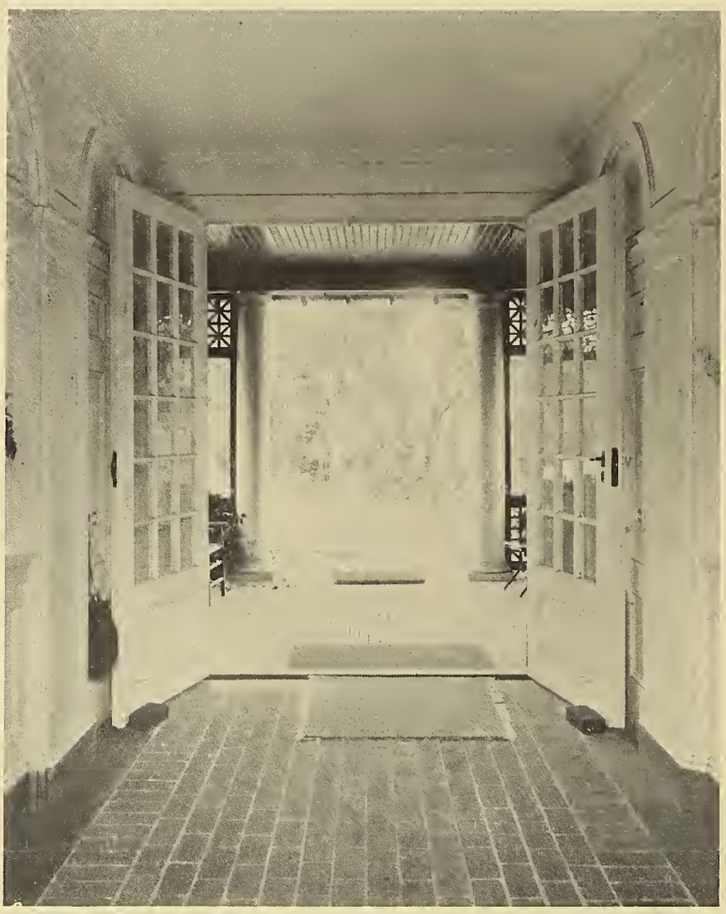


The tendency in the design of half-timber houses is to overdo the timbering, securing intricate patterns at the expense of repose—a fault that was carefully avoided

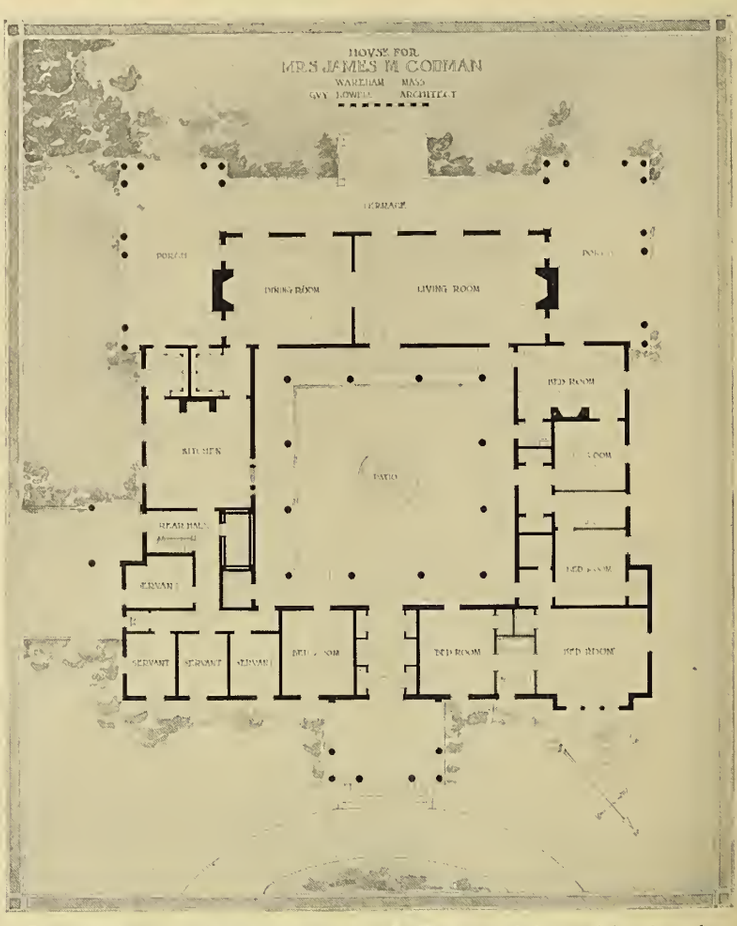
The second-story hall has been kept down to the minimum of area by skillful planning. The room at the rear of the ell, with its adjoining bath, is for servants, a stairway to the kitchen is close by



The large house that is built with but a single story is extremely rare. And the reason is not far to seek—cost. There is a great deal of satisfaction, however, in being able to do away with stairways, upper halls, etc., in favor of rooms that open directly upon the cool patio



Looking out from the main entrance hall towards the entrance porch. The white woodwork is particularly cool and inviting in contrast with the red brick paving



In addition to the entrance porch illustrated herewith, the plan shows two larger porches and a terrace at the far end, on one of which the dining-table is frequently set

THE PATIO HOME OF MRS. JAMES M. CODMAN, WAREHAM, MASS.—*Guy Lowell, architect*



The broad overhang of the roof gives a deep shadow that is essential in a summer home not protected by large shade trees



But the real heart of the Codman home is the patio—at any hour of the day offering cool shade and the refreshing music of the fountain in the lily-pool

THE PATIO HOME OF MRS. JAMES M. CODMAN, WAREHAM, MASS.—*Guy Lowell, architect*



Inside the House

Timely Suggestions and Answers to Correspondents



The Editor will gladly answer queries pertaining to individual problems of interior decoration and furnishing. When an immediate reply is desired, please enclose a self-addressed stamped envelope.

After-dinner Coffee and Smoking Cabinet

A COMPACTLY arranged piece of furniture that is particularly suitable for bachelor quarters or for the summer piazza is an after-dinner coffee and smoking cabinet made of English wicker in a rich shade of brown, with red leather trimmings.

A glass tray with light mahogany rim fits over the top and holds the smoking articles, all of which are of glass mounted in silver. In the upper compartment is the coffee set, of white porcelain with silver mountings, on a silver tray with a handle at either end. The cups, which are like small mugs in shape, have bands and handles of silver and are used without saucers, so that they are easier to handle and take up less room.

The lower compartment holds a mahogany humidor of generous size. The cabinet is fitted with doors, and when not in use looks like an ordinary wicker table with a tray and a smoking set on it. The door of the compartment that holds the coffee set is hinged at the bottom and is let down by means of brass chains, while the doors of the lower compartment which open outward, are fitted with a brass lock mounted on a broad red leather band.

A less elaborate cabinet is made in the same style, with only the smoking set and the upper compartment, that may be uesd for either the coffee set or for the humidor, if an entire smoking outfit is desired. This cabinet is the same size and height as the one shown in the illustration, the only difference being that the lower part is not enclosed, and there is no second compartment.

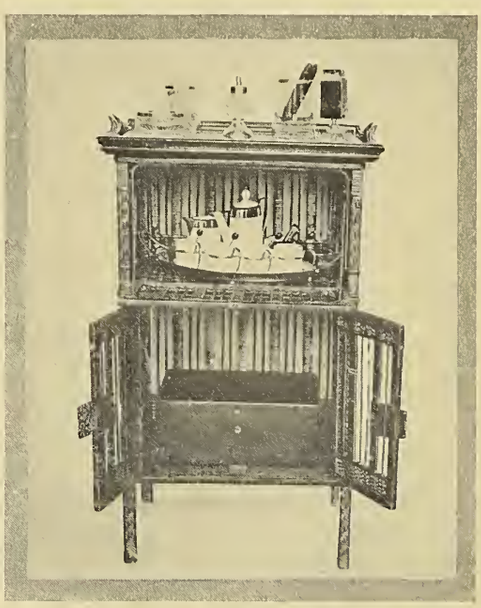
A New-Old Rug

THERE is a new rug shown this year, for use in summer cottages, bungalows, and on piazzas, which is really a very old-fashioned plan revived. It is the "rush rug." It is made on the plan of the old-fashioned round, braided, rag rug, and comes either oval or round, convenient in size for almost any space. The greenish-yellow rushes are braided into flat bands about three-and-a-half inches wide, and these are strongly sewed together. The edge is finished with a pattern worked in the rushes by interweaving a narrow strip of dark colored woolen cloth—a strip such as is used in making a woven rag rug. This strengthens the borner while serving as a decoration. The center of the rug is also interwoven with the wool strip, making a simple conventional pattern. For spaces in which a runner or oblong rug is not available, the circular or oval rush rug may be used with splendid effect. The wearing qualities—if one may judge from the rush-bottomed chairs of our great grandmothers—should be all that one might desire.

About Laying Linoleum

WHEN linoleum is first laid it should have a little careful attention, which will well repay the purchaser. Linoleum is not intended to "wear forever," as a brick or stone floor might, but it does wear wonderfully, and provides a sanitary, artistic and durable covering at a moderate cost. When one takes into consideration the fact that it gets as hard wear as one's shoes, one is easily convinced that the best quality only will pay.

Linoleum should never be *tacked* to the floor; the cement which comes for the purpose of holding it in place keeps water from getting underneath, and increases its durability. A 12-inch layer of the cement around each edge of the linoleum, firmly pressed to the floor and weighted down, will make water-tight seams and edges. Rubber tips on the chair legs and the supports of other heavy furniture should be used until it is thoroughly set or seasoned.



A very attractive combination of smoking and after-dinner coffee cabinet that is a valuable addition to the porch furniture

Cork Mats

CORK mats, which come in small and in large sizes, from one-half to three-quarters of an inch in thickness, have more than one use which appeals to the householder. Besides the great convenience of the mat placed before the sink and the washtubs, cork has superseded the Turkish bath-rug in the bathroom; and in the tub, to keep one from slipping, the rug is most desirable. Underneath the baby bath in the nursery, where splashing is in order, the usefulness of the cork mat is apparent. A small cork mat is well provided for every woman who must kneel in scrubbing.

A Convenient Bungalow Porch

WITH the same careful planning that was evident in the kitchen and bathroom, the bungalow builders provided for their porch. It was one, by five, by nine ft., closed in, and was built on the north side of the bungalow, in order to avoid some of the discomforts and inconveniences that fall to the lot of a kitchen in the country, especially a kitchen that opens directly on the back stoop.

Half of the space is given to a closet for ice box and provisions; the door and partition separating this from the rest of the porch keep it so cool that for two seasons ice has not been needed until July. This food closet is used also for storing water from a neighboring well, and the twenty feet of shelving make possible the convenient disposal of quantities of provisions, and numerous articles, that must be kept handy and for which the kitchen is

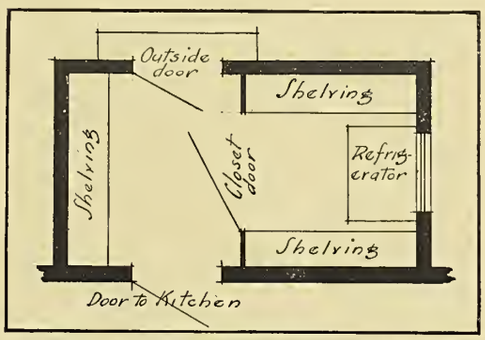
too warm. This closet saves many journeys on the cellar stairs, accommodating practically everything in the way of food, except what is kept in the preserve closet in the cellar. A small window insures ventilation.

The special value of the other section of the porch is that it contains a shelf reserved especially for all incoming and outgoing packages. This arrangement does away with the "slavery" so often complained of by suburban housekeepers. There is no need to give up an outing because the "grocer hasn't come," for the outer porch door is left unlocked, the refrigerator closet and kitchen securely fastened, and the shelf does the rest. Nothing has ever been stolen, and the shelf is out of the reach of animals. Ice man, grocer, laundryman, baker—too often with muddy boots—never need cross the threshold of the kitchen door, which is no small help in keeping the kitchen clean. This section of the porch contains, also, over twenty feet of shelving, used for numberless odds and ends that are not wanted in the kitchen, where space is valuable. Many needful but unsightly articles, such as oil cans, kindling, garbage pails, etc., are practically as handy as they would be in the kitchen, but having a separate place for them makes it possible to have an attractive kitchen.

In freezing weather, when the porch is too cold for some sorts of provisions, both sections are useful as storage places for various articles, saving numerous trips to the cellar. The upper part of the outer door is of glass, a better plan than to have a regulation window in this part of the porch, which would have resulted in more expense, wasted space and exposure to cold. This outer door, in addition to the kitchen door, provides sufficient protection from the weather, so that a storm door is not needed.

Even the space under the back porch is not wasted. The grade leaves a vacancy two feet in depth. This, closed in, is used to keep firewood out of sight and protected from storms until it is sawed up.

A special step was built outside the door, eighteen inches in width by the full nine feet of the porch. The part not required as a step is put to excellent use as a shelf for outdoor utensils. To prevent neighbors' cats from sampling the milk, sometimes found on the tops of the bottles, a deep tin receptacle is used for both full and empty bottles; this has the further advantage of preventing breakage of bottles, sometimes caused by a high wind. A disused wash boiler is kept for soapy water from the laundry, which is put there to await the evening watering of tomatoes and cucumbers. In winter this receptacle is useful for sand to sprinkle on the icy

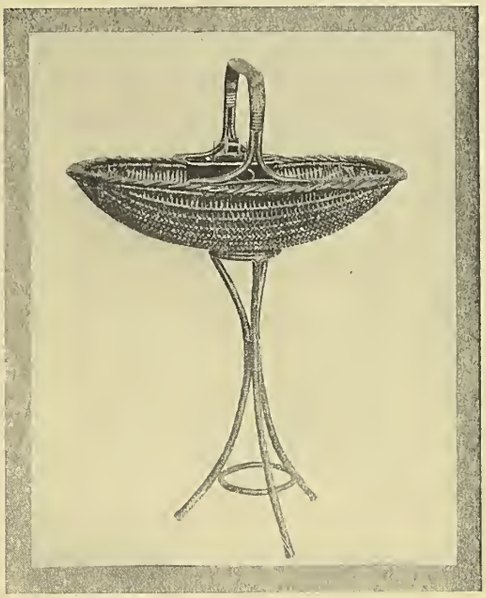


Careful planning has made this small porch a useful part of the bungalow

walks. The cover keeps the sand dry, when that in the neighborhood sand bank is frozen solid. A covered garbage can is kept purposely for empty tin cans and other unburnable rubbish, till a convenient time arrives to bury them, so that even the smallest detail is well provided for.



The extension porch serves for several rooms. It keeps tradesmen from the kitchen and the refrigerator closet makes a good storage cellar



A useful garden basket which is fitted with a spool of wire and garden shears, and provided with a permanent support

Garden Baskets

SOME of the new garden baskets for holding freshly cut flowers are not only fitted with scissors and a spool of wire thread, but have a tripod on which they are placed when not in use. They are substantially made of brown wicker and some are lined throughout with leather, while others have only a wide strip of the leather that extends from side to side directly under the handle.

In shape they are broad and shallow and the handles are straight across the top with rounded corners, making them particularly easy to carry. On one side is a pair of scissors in a little pocket made of the leather, and on the other is the spool holder with the spool of wire thread for tying up the flowers. The tripod which is also of wicker, matches the basket in color, and is an important item, as it raises the humble garden basket to the dignity of a piece of furniture instead of just an ordinary flat basket that is thrown on the floor when finished with, and that usually lives tucked away in the hall closet.

Care for the Range Connections

THE washers which are used in the connections between the range waterback, and also at the connections at the top and bottom of the hot water boiler, usually give out in a short time, this being caused by the heat they are subjected to from the hot water, and also from the evil effects of expansion and contraction. If they are soaked in linseed oil for an hour or two before they are placed in position the user will be astonished at their increased length of life.



Garden Suggestions and Queries



Conducted by
F. F. Rockwell

The Editor will be glad to answer subscriber's queries pertaiing to individual problems connected with the garden and grounds. When a direct personal reply is desired please enclose a self-addressed stamped envelope

May

APPLE Blossoms and the Birds! Why say more?—there's none so poor but shares the wealth of May when she comes scattering largesse over the revivified land. Then there is inspiration and new life for poet and peasant, beggar and king. Everyone knows it, but most feel it with a sigh and the painful thought, "It is not always May, and Spring is fleeting; tomorrow we——" To them the month is lost forever, for the message is misunderstood. The glad-hearted man greets May and keeps her with him throughout the circle of the year, husbands her charms and calls them to him from violet time until the fall cosmos blows or the white Christmas rose peeps through the snow. And for this magic he uses a spade!

In the Flower Garden

THIS, then, is the time to plant so that the summer and fall may be beautiful. Almost all the garden annuals and perennials may be sown, among them ageratum, alyssum, aster, balsam, calendula, corn-flower, cosmos, lobelia, marigold, mignonette, morning-glory, nasturtium, petunia, stock, verbena and zinnia. This year try a few lupines and salpiglossis; both are easily grown and very beautiful. The peculiar metallic tints and velvet texture of the salpiglossis in particular is matched by those of no other flower that I know. It should be much more widely known.

In planting flower seeds be sure to have the bed both very finely prepared and fresh. As most of the seed is very minute, it should be barely covered at all. A good way is to use a piece of flat board, several feet long, and make the drills—just a straight mark—along one edge: sow the seed, and press firmly in with the edge of the board. Then, very lightly, go over the beds crossways with the back of the rake, following with a good watering, applied with a fine nozzle, so as not to wash out any seed. As a rule, it will be more satisfactory to start all the flowers in some specially prepared place, and when large enough, transplant to their permanent places. This plan insures better plants and obviates unsightly bare spots where seed came up poorly.

Among the flowers of which it will be better to buy plants, instead of seed, are early asters, begonias, tuberous begonias, cannas, coleus, geraniums, heliotrope, early lobelia, pansies (for spring bloom), salvias



Clarkia's pink or white blossoms should be better known. It is an old annual lately much improved.

and verbenas. Don't expect, because these plants look flourishing when you get them from the florists, that they will continue to grow luxuriantly no matter how poor or hard the soil in which you place them—enrich your flower beds! Give them some manure. Spade them up deep! If necessary, dig them out, and put in cinders, cobbles or some other rough material to furnish sufficient drainage. A dozen good healthy plants will make a great deal more show than fifty struggling, scraggly ones.

Try mass effects! In one bed, or spot, put in plants all of one kind and color—just to compare its effectiveness with the old style of bed, made up in rows. Transplant now clumps of iris, phlox and other hardy perennials that are to be moved or divided, if this was not done last fall. Vines and shrubs should be moved or set out; in the former case especially, don't be afraid to prune back well.

Do not be content to read the suggestions over and think how delightful it would be if you had this or that effect on your own place. Select a few—two or three, or even one, if you cannot afford the time or the money for more—and adapt it to your own opportunities. You can afford a vine-wreathed shady porch, for bulbs of the madeira vine can be had at thirty-five to fifty cents a dozen, or a group of brilliant and beautiful gladioli—in mixed shades they cost from a dollar to three or five per hundred, or an edging of one of the new named, solid-colored nasturtiums, fronting a mass of asters, for both of which the seed would not cost over fifty or seventy-five cents; or a hedge of the symmetrical quick-growing Kochia (summer cypress or burning-bush) a packet of which costs ten cents.

It is not the cost, not the difficulty of finding out how to use inexpensive plants effectively that prevents the owner of the small place from having individual and attractive home surroundings. It is simply that he doesn't act. Why not, right now, make a little sketch of at least some spot of the grounds, plan out what to plant, order the necessary seeds or bulbs, and as a result of your quarter or half-hour's work, have something in which to find interest and pleasure all summer.

In the Vegetable Garden

IN the vegetable garden there is work aplenty. In the first place, there are a lot of second sowings, for succession crops—among them beans, beets, carrot, kohlrabi, lettuce, leek, peas, potatoes, radish, spinach and turnip. In this department for last month, detailed information

in regard to planting seeds of various sizes, in various ways was given, and unless this work has become perfectly familiar to the garden-maker, it will be well to refer again to those pages. The vegetables of which first plantings are now to be made, in many instances require different treatment. Cucumbers, muskmelons, watermelons, squashes and pumpkins are planted in hill usually specially prepared, when they are grown on a small scale. They like a light, warm "quick" soil, a rather sandy loam, with good natural drainage. They will do best on sod or rye turned under, the former in the fall, the latter a month previous, but this is, of course, not essential. After marking out the hills, six to ten feet apart, according to variety, dig out holes about eight inches deep and eighteen to twenty-four inches square, and in each put several forkfuls of well-rotted manure, unless a compost for the purpose has been prepared. Add to the manure for each hill half a pint of guano or phosphate, or, better, about a gill of cotton-seed meal, and work it thoroughly through the manure; then mix the whole with the best of the soil previously thrown out, leaving the hill level and not more than an inch or so above the soil's surface. The hills are now ready for the seeds, or plants on sod from the frames. If the former, cover about an inch deep, putting ten to twenty seeds of cucumber or muskmelon, or five to twelve of squash or pumpkin, in each hill. Press the soil down firmly. If setting out plants, water freely under the surface, if the soil is at all dry. Do not put out until all danger of late frosts is over. The easiest and surest way to keep off bugs is to cover the hills or plants with wooden boxes about eight inches high and covered with mosquito wire or protecting cloth.

Another class of plants to be set out the last part of May and first of June, is composed of tomatoes, peppers and egg-plants. Hills may be prepared for these in about the same way, except that they need not be so large, and for tomatoes should not be too rich, especially in nitrogen in lasting forms. A dressing of nitrate of soda, however, a few days after setting, will be beneficial to all. In well-enriched garden soil, no special preparation of the ground will be necessary.

For pole beans, which should not go in for ten to fifteen days after the dwarf sorts, hills may be prepared as for melons. A great improvement over the old-fashioned pole is had by nailing a few laths across a 2 x 4-in. piece of scantling about eight feet long. First plantings of early bush beans and early corn will also go in during the first part of this month.

Watch the Weeds

WHILE doing all this interesting planting, however, do not forget the weeds that are coming up by the hundred in the rows and beds planted last month. They are very small at first—so small that it does not seem possible they could ever seriously contemplate crowding out the rightful occupants of the garden space. In the hot noon sun they seem to have disappeared altogether! But you go out early next morning, when the dew is still on, and there they are again, beginning to make the whole place look green. Then, no matter what there is that you want to do, go back to the tool-house and rig up the discs or hoes on the wheel hoe and go over each row as close as you can get without cutting out the little seedlings of onions, carrots or beets. That will make the patch look quite respectable again, but don't stop there. If you do, you're lost. Get your hand-weeder and go over every inch of soil between the plants in the rows. If there's no weed to be seen, no matter; break it up just the same, for there are dozens sprouting or waiting for warmer days—besides the benefit the plants get from this working around is incalculable.

The cabbage, lettuce and other early plants set out last month will also require cultivating, which can, however, be very expeditiously done with the hoe. Don't let the weeds get so large that you must waste time chopping and pulling them out. Hoe before it is too difficult. Work the ground rather deeply—three or four inches between these large plants, until the weather begins to get hot and their roots large, and then give frequent shallow cultivation. Keep a watch out also for the green cabbage-caterpillar, root-maggot and cut-worm. For the first of these pests, if the cabbages have not begun to head, use Paris green, or arsenate of lead, spray; if they are heading, hellebore. For the root-maggot, after he once starts, there is no sure cure, but strong caustic lime-water, or kerosene emulsion, poured about the roots, first removing an inch of soil, will help to check them, and all badly infested plants should be pulled and burned. The cut-worm is more easily reached. Almost invariably you can find him, if you look carefully, around the root of the plant he has chewed off. A quart or so of bran, wet to a mash, and sprinkled with a little Paris green, will prove a fatal bait.



The balsam apple, *mamordica balsamina*, a vine beautiful in its flowers, leaves and fruit, can be planted for immediate effect

Fruit and Berries

AMONG the fruit trees and berry bushes there will be spraying that should not be overlooked this month. It would be too easy to grow fruit if it were not for the spraying. The hardest work about spraying is just to get at it—it's new, unusual for many beginners, and so they seem afraid to try it.

Go over your grapes and rub off any undesired buds that may be starting. This is much quicker and better than waiting for them to grow, then cutting them off.



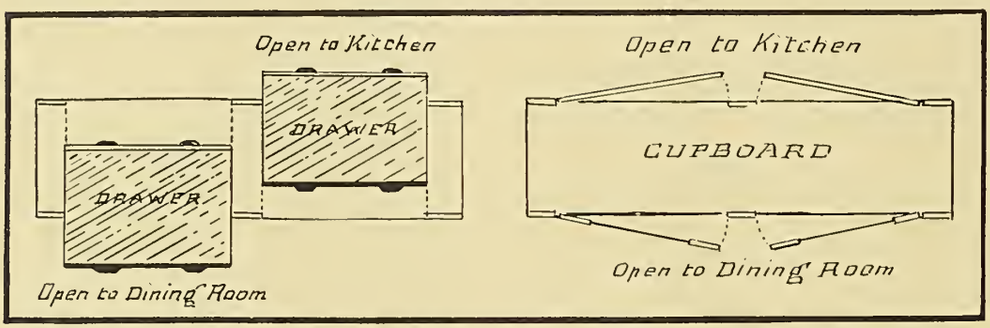
Try mass effects this year. In one spot put in many plants of one kind and color and by a process of selection make it a bed of finest specimens. Bellis or bachelor's-button is used in the foreground

Ingenious Devices

LABOR-SAVING SCHEMES AND SHORT CUTS IN THE HOUSE AND IN THE GARDEN

A Helpful Sideboard

IN a house whose owner is a militant "practicalist," I saw several schemes for economizing the labor, time and patience of the housekeeper. The pantry sink, for instance, at which she expected to wash her choicest china and dearest heirlooms, was built to order at a definite height. She claimed a standard height sink was as ridiculous as a standard height in women, and had it constructed to save the cramped back and arms of one working in an unnatural position. Then, too, the sideboard was an assistance. It was built in and planned to back up upon the pantry, where it was finished as a cupboard. The drawers could be pulled out either from the dining room or pantry side—and the compartments above were fitted with doors working in a similar manner. On the dining room side they were finished to match the rest of the woodwork and the doors were glass; on the other side the finish was similar to that of the pantry. This idea saved carrying the silver and china first from one room to the other and then back again through the swinging door. After the washing the various articles were arranged in drawers or compartment as they were to remain. The drawers could then be opened on the dining room side at the next meal, and the dishes in the upper section could be reached by the glass doors. A. W. D.



This sideboard has an entrance on both the kitchen and dining-room. The plan shows how the drawers can be opened, or dishes put in the cupboard section, from either side

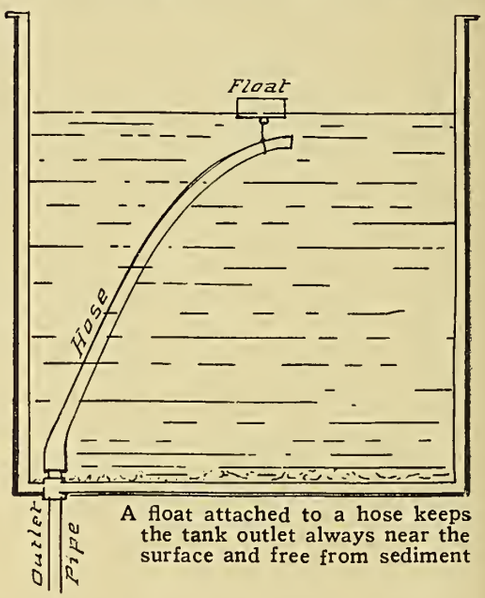
A Backyard Screen

A COMMON difficulty, where the houses in a suburban community are grouped close together, is to secure at least a reasonable privacy for the backyard. Particularly true is this when there are no hedges or fences in the front—an arrangement that is supposed to bring spaciousness, but which actually fails in this and in securing privacy as well.

The accompanying photograph shows one solution of the problem in a suburb of Chicago. From simple seventeen-inch brick piers with cement tops, and rough hemlock plank and boards, a screen has been built between two adjacent houses. The unplaned timbers and sawed-out boards were given a creosote stain to harmonize with the exterior woodwork of the houses themselves. Upon the structure vines have already started to grow and, if not allowed to obliterate the architectural character of the screen, will add to its effectiveness. R. F.

To Prevent Sediment from Tanks

WHEN one has an attic tank and pipes from this to supply the house water, it frequently happens that if roof water is caught without careful filtering that sediment will come down the supply pipe at the bottom of the tank. The same trouble occurs with cisterns where the intake of the pump pipe is near the bottom. A contrivance to prevent this in the case of the attic tank consists of a piece of hose a few feet long attached to the outlet inside the tank, and with a float attached to the outer end. When the tank is full the hose extends straight up and takes in the water from within a few inches of the surface where it is free from sediment of any kind. As the water gets lower the float falls, the open end of the hose always remaining within a few inches of the surface. The tank may be cleaned out and flushed with no other outlet than the supply pipe which may be inserted in the bottom. When the piece of hose is removed drain the tank by having a two-way cock inserted on the lower floor. This arrangement will prevent the sediment in the hot water heater.



A float attached to a hose keeps the tank outlet always near the surface and free from sediment

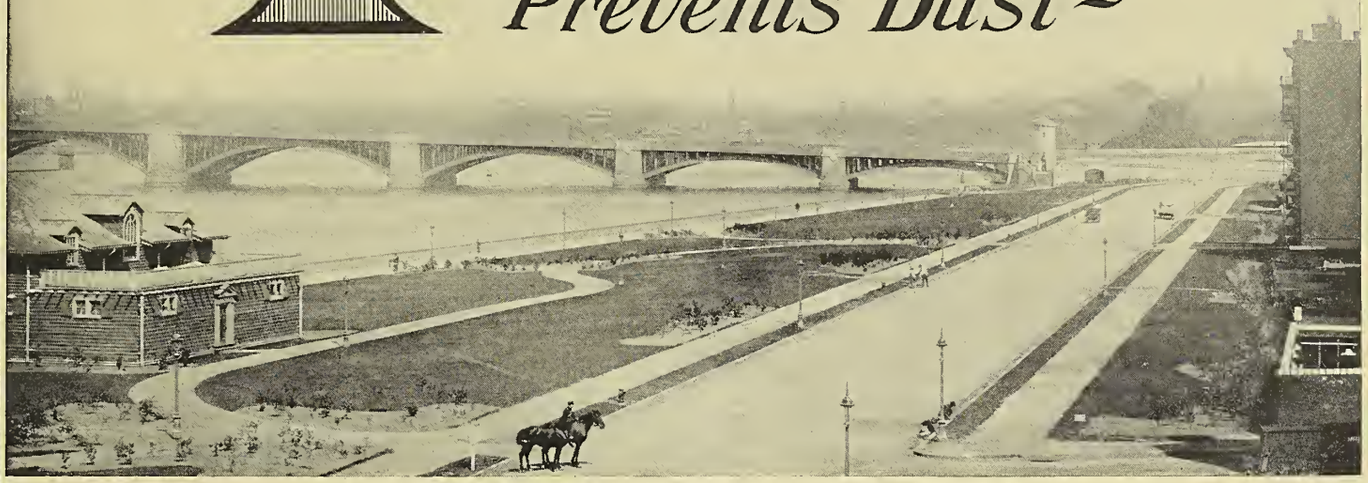
The same contrivance may be attached to the iron pump pipe in a cistern. With a larger float the results are the same. H. F. G.



A backyard screen that serves its intended purpose well and at the same time is an added attraction in the yard

Tarvia

Preserves Roads
Prevents Dust~



A road in the Metropolitan Park System, Boston, built with Tarvia X.

Send for New Booklet

We have recently issued a new and beautifully illustrated booklet, detailing the experience of many town authorities and road engineers with Tarvia.

It shows how in one case after another Tarvia was first tried on experimental strips, frequently in competition with other materials. Then after the experience of a year or so, all other dust layers and road binders were discarded and Tarvia was used more and more extensively.

Some engineers have adopted the broad policy of using Tarvia in all *new* macadam construction. Many road authorities go still further and aim to treat all the old macadam roadways with Tarvia to preserve them against the destructive effect of automobile traffic and prevent dust.

We want property owners to know that a dusty road is not merely a nuisance to them but is an endless burden upon them as taxpayers—because dust means that the macadam is pulverizing and the surface blowing away.

We want property owners to realize that the road authorities of their town can give them comparatively dustless macadam roads at little or no extra cost.

We want road engineers to realize that they can reduce their maintenance costs by bonding their roads with Tarvia, and that the saving in maintenance will generally pay for the Tarvia application.

We therefore urge everyone interested to send for our booklet to nearest office.

BARRETT MANUFACTURING COMPANY,

New York, Chicago, Philadelphia, Boston, Cleveland, Cincinnati, St. Louis,
Kansas City, Pittsburg, Minneapolis, New Orleans, Seattle, London, Eng.

TRADE B MARK

Asbestos Shingles

Infringement Suit **Injunction**

THE PRESIDENT OF THE UNITED STATES
TO

H. W. JOHNS-MANVILLE COMPANY, and its associates, directors, officers, servants, agents, workmen and employees, GREETING,

WHEREAS, it has been represented to us in our Circuit Court of the United States for the Southern District of New York, that Reissue Letters Patent of the United States No. 12,594, were issued to Ludwig Hatschek in due form of law on the 15th day of January, 1907, and that the Asbestos Shingle, Slate and Sheathing Company is the sole and exclusive owner of the rights to make, use and sell the inventions and improvements or discoveries of said Reissue Letters Patent No. 12,594, and that you, said H. W. Johns-Manville Company have infringed upon said Letters Patent, and upon claims 2, 3, 4, 5 and 7 thereof, which read as follows:

"2. The herein-described process of producing artificial stone plates, consisting of first mixing fibrous material and hydraulic cement in the presence of a great bulk of water, then forming therefrom a series of thin layers of the mixed cement and fibrous material superposed on each other until the required thickness is secured, then pressing the same and allowing the material to set or harden."

"3. The herein-described process of producing artificial stone plates, consisting of first mixing asbestos fibres and hydraulic cement in the presence of a great bulk of water, then forming therefrom a series of thin layers of the mixed cement and asbestos superposed on each other until the required thickness is secured, then pressing the same and allowing the material to set or harden, substantially as set forth."

"4. The herein-described process of producing artificial stone plates, consisting in mixing fibrous material and hydraulic cement in a bulk of water sufficient to render the cement colloidal, then forming therefrom a series of thin layers of the mixed cement and fibrous material superposed on each other until the required thickness is secured, then pressing the same and allowing the material to set or harden."

"5. The herein-described process of producing artificial plates, consisting of first mixing fibrous material and hydraulic cement in the presence of a great bulk of water, to render the cement colloidal, then forming therefrom a series of thin layers of the mixed cement and fibrous material superposed on each other until the required thickness is secured, then pressing the same and allowing the material to set or harden."

"7. A product of the invention herein-before set forth, being a composition containing hydraulic cement which has been rendered colloidal."

and upon the exclusive rights of the Asbestos Shingle, Slate and Sheathing Company thereunder.

NOW, THEREFORE, we do strictly command and enjoin you, the said H. W. JOHNS-MANVILLE COMPANY, your associates, directors, officers, servants, agents, workmen and employees, and each of them, from either directly or indirectly making or causing to be made, using or causing to be used, selling or causing to be sold, or disposing of in any way, or advertising for sale any Imitation Stone Plates, Slabs or Tiles containing or embodying the invention covered by said Reissue Letters Patent of the United States No. 12,594, issued to Ludwig Hatschek, and particularly specified in claims 2, 3, 4, 5 and 7 thereof.

WITNESS THE HONORABLE EDWARD D. WHITE, Chief Justice of the Supreme Court of the United States, at the City of New York, on the 18th day of February, 1911, and in the hundred and thirty-fifth year of the Independence of the United States.

JOHN A. SHIELDS,
[SEAL] Clerk of the Circuit Court.

Keasbey & Mattison Company, Factors
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MRS. HERBERT NELSON CURTIS
22 East 34th Street NEW YORK CITY
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Building Brick Houses of Character

(*Continued from page* 342)

tions of architectural propriety. Many of us are such creatures of habit, and so blindly convention-ridden in our circumscribed horizon, that we look askance at any departure from sober precedent as we know it, and are apt to feel that anything else than sad-colored exteriors would not be quite respectable. In other words, we are still laboring under the bondage of a kind of architectural Puritanism, at least so far as most of our houses are concerned. It is high time we had a rebellion against this dull, depressing sombreness, this false notion from a false period of Anglo-Saxon propriety in taste.

In the last few years there has been a notable change in the character of our public buildings, indicative of the change in our broadened moral, artistic and temperamental outlook, and it is eminently fitting that architecture should thus reflect and express the life of the people. This change should next make itself felt in our domestic architecture, and to this end we cannot do better than study Continental models. For country and suburban houses the Colonial style is too firmly entrenched ever to be supplanted, and it is not desirable that it should be, but there is room enough for all styles, and we might copy to advantage, in some of our city houses and country estates, some of the devices of wall ornamentation to be found abroad.

There is no reason why ornamentation should not be in perfect accord with robust and virile architectural expression. To be convinced of this, one need but look at some of the French renaissance farm buildings, which were quite as fully ornamented as the châteaux to which they belonged. The pictures showing a tower of the Château de St. Agil, and the hunting lodge at Moulemont give some idea of the richness of ornamentation to be gained by the colored diapering. Instances might be indefinitely multiplied, some of them of great interest.

Americans have always displayed a remarkable aptitude for appropriating what it good and adapting it to their needs. We may confidently expect a bright future for brick ornamentation in America, for, as the resources and possibilities of the older work are more fully realized, popular demand will ensure the perpetuation of forms of decoration of which we have been neglectful too long.

Some Edging Plants Worth Trying

(*Continued from page* 353)

of the easiest culture and if the flowers are picked as they fade so as to prevent the formation of seed the flowers will be finer and the succession of bloom more continuous and extended.

The violas or tufted pansies make admirable border or edging plants and when planted in a somewhat shaded position will give a continuous bloom for several months. The tufted pansies do not show

the great diversity of color and markings that we are familiar with in the larger pansies, but for work in solid colors they are excellent. Especially is this true of the golden Lutea Splendens and the White Perfection. Violas are easily grown from seed which should be started early in flats or coldframes and planted out before the weather becomes hot. Give plenty of water during the blooming season and treat in all general particulars, like pansies.

For a permanent edging one could not do better than to select one or more of the hardy garden pinks of which Her Majesty is the finest white; this variety, however, is a June bloomer, but White Reserve, an almost equally good form, is a perpetual bloomer. The old-fashioned June or Cinnamon pink will always be a welcome addition to the garden and is lovely when covered with its pale pink, delightfully scented flowers. All of this class of pinks are easily increased by division for wherever the branches touch the ground they form roots and can be removed and set out elsewhere; so that in a few seasons one can produce many feet of edging from a single original plant.

The polyanthus was always a great favorite in our grandmothers' gardens and is just as attractive today as then. The plants may be raised from seed or purchased from the florist. They require dividing each year, as soon as their period of bloom is past, so a few original plants will soon provide for a considerable extent. They are perfectly hardy, but the flowers will be much finer if some protection is afforded the plants during winter.

The *Phlox subulata* make a beautiful edging for beds of hardy perennials, especially when covered with its wealth of rose-colored or of white flowers in early spring. It needs some attention, however, as it spreads rapidly and the old growth is apt to die out and should be removed to prevent an unkempt appearance. For beds of Japanese or German Iris there is an attractive dwarf variety of iris—*Iris gracilipes,* which grows but eight to ten inches high and produces quantities of lavender flowers, while for the canna beds there is nothing more characteristic than the dwarf nasturtiums. The dwarf campanula (*C. carpatica*) is an excellent low-growing plant for edging beds of taller varieties, growing but eight inches high and producing quantities of blue or white flowers from June to October. The plants are hardy and easily grown.

Where the flower beds are inclosed with curbing the edging plants may take the form of erect growth, but where boards must be used to retain the beds it is desirable that they be covered by some form of recumbent plant like the *Phlox subulata,* hardy garden pinks and the like. Certain of the dusty millers are useful in this connection, as the recurved leaves droop and cover the sides of the beds. The plants are easily raised from cuttings, as it is only necessary to cut twigs of the plant into short lengths and stick them in



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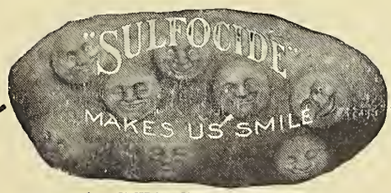
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B.G. PRATT CO., Manufacturing Chemists,
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Which Do *You* Smoke?

I doubled my business in 1910. As I write this, 1911 is doubling 1910. Been doing this for quite a while now.

I've seen the rise and fall of a dozen brands while Makaroff has been growing up—and I expect to see dozens more rise and fall while Makaroff ***keeps right on growing by holding old friends and making new ones all the time.***

What's the answer? Listen—the usual way of putting a new cigaret on the market is to put the same old cigaret into a new box, and ***whoop 'er up!*** A big selling organization and big advertising are brought to bear and ***big sales are the result.*** The first few years of the usual "new" cigaret are its best years. Sales are big and profits are big only while the advertising is big. When the novelty of the new label wears off and the public is ready for a change, ***the process is repeated***—and the patient public goes on ***smoking advertising***—not cigarets.

For fifteen years the public has been ***stampeded*** from one cigaret to another in just this way, and about the only change it ever gets is from a red box to a blue one and back again—with perhaps an occasional dash of brown. In short, the average cigaret is not a ***smoking*** proposition, but a ***selling*** proposition.

The Makaroff business is different. I started the manufacture of

MAKAROFF RUSSIAN CIGARETS

because that was the only way I could be sure of ***getting the kind*** of cigarets I wanted. It has grown because there are a lot of other folks who ***want that kind*** of a cigaret. And the number grows just as fast as people find out ***what kind*** of a cigaret Makaroff is.

Just let this fact sink into your consciousness and stay there—***this business is*** and ***always will be*** operated to make a ***certain kind of cigarets***—not merely to do a certain ***amount*** of business. I always have believed that if we produced the quality, the public would produce the sales. And that faith has been justified. Makaroffs are really different from other cigarets—and the difference is all in your favor.

You will find that you can smoke as many Makaroffs as you want without any of the nervousness, depression or "craving" that follows the use of ordinary cigarets.

Makaroffs are absolutely pure, clean, sweet, mild ***tobacco, untouched*** by ***anything whatever*** to give them artificial flavor, sweetness, or to make them burn.

Pure tobacco won't hurt you. You may not be used to it, and you may not like the first Makaroff, but you'll like the second one better, and you'll stick to Makaroffs forever if you once give them a fair chance. We have built this business on quality in the goods and intelligence in the smoker—a combination that simply can't lose.

Makaroff No. 15 is 15 Cents—No. 25 is a Quarter

Ask Your Dealer

Makaroff - Boston

Ask Your Dealer

Mail address, 95 Milk Street—Boston, Mass.

A Purple Martin House at Cost



This house is built especially for the colonization of that social, useful little bird-neighbor, the purple martin.

It is not a make-shift miniature, but is of three eight-room stories and attic.

The house is 28 inches high, substantially constructed throughout and always gets the martins. It may be purchased at cost by bird lovers anywhere for $11.00 f. o. b. Chicago. Correspondence solicited.

JOS. H. DODSON,
901 Association Building, Chicago.
Director Illinois Audubon Society.



Removable Steel Clothes Posts

fit into sockets driven level with the ground, leaving the lawn free for mower or other purposes. Posts are held rigidly, but can be removed in a moment.

NO HOLES TO DIG

The sockets you can easily drive yourself. The adjustable hook makes clothes hanging easier.

Why disfigure your lawn with a wooden post which will last only a few years. You can buy our posts for less money and they will last a lifetime.

Write for folder D.

Milwaukee Steel Post Co.
Ask your dealer. Milwaukee, Wis.

the ground where they are wanted. In warm, moist weather they will root readily and grow freely from the start and the silvery foliage is very attractive and effective, especially when used in combination with dark-leaved foliage plants. The plants may be easily raised from seed sown in flats in the house or in the hotbed.

Beds of hardy anemones are improved by the native hepatica which does admirably under cultivation, as does the wild anemone (*A. Sylvestris*).

The *Arabis,* or rock cress, makes dense tufts of foliage covered with white flowers in early spring. The double form is the more attractive, and both it and the single are excellent for edging or for carpet bedding.

There is a pretty little saxifrage recently introduced—*Tunica saxifraga, flora rosea plena*—which should prove very desirable both as an edging plant or on the rockery. It makes a dense tuft of exceedingly bright green foliage and is literally covered during the entire summer with double blush-pink flowers. If one does not care to go to the expense of purchasing a considerable number of plants of the florists, one may grow them from seed or one could indulge in a single plant and from that save seed for an extensive planting the following year.

One of the showiest annual flowers for edging is the candytuft, variety Empress, which gives immense spikes of pure white flowers and comes into bloom in a very short time from the sowing of the seed. Two or more sowings should be made for a continuance of bloom, the first in flats or the hotbed and the second in the open ground.

Then there is the Tiarella—a pretty little native plant about eight inches high with spirea-like spikes of white or of rose-colored flowers in May and June. It is a fact that we are constantly purchasing of the florist and nurserymen native plants which we could have for the digging if we only realized their worth when growing in their native haunts. Usually they appear as something novel and rare when appearing under their botanical names in the catalogues. I recall buying, and making much effort to succeed in making grow, a couple of clethras, and later in the season finding two immeasurably finer specimens which had come up, bird-sown I suppose, in a berry patch which had been in sod for some years. The plants were three or four feet high and in bloom when discovered. If one will let a bit of good land lie idle a few years he will, in time, find himself possessed of many native plants, some of which may not have been known in the vicinity before. My wild flower garden, the soil of which remains undisturbed from year to year, now possesses many plants that have moved in of their own accord, some of them very desirable, too.

The schizanthus make charming edging plants, being literally covered with their lovely, orchid-like flowers. They are annuals, and for early bloom the seed should

be started in flats in the house or hotbed in April, and planted out where they are to flower when the weather is warm. At the time of transplanting a second sowing of seed may be made in the open ground between the plants already set, as the schizanthus gives one remarkable burst of bloom and then dies or amounts to very little afterwards, but while this florescence does last the plants are a perfect pyramid of blossoms. As soon as the young plants are up the old ones may be pulled up to make room for them and they will soon come into bloom. A third sowing may be made as the second is coming into flower, which will carry the edging well through the summer.

Bacteria as the Gardeners' Allies

(*Continued from page* 354)

deners. Many experiments were made, by U. S. and foreign departments of agriculture, and by individual scientists and farmers. Healthy bacteria were collected from legumes by the United States Department of Agriculture, spread on cotton, and sent to all parts of the country for trial. Some of these trials were successful, although the bacteria were dried, for by good treatment they were brought back to life; others dried out entirely and died because they were separated from their natural element, moisture.

It remained for someone to find an artificial medium in which the bacteria would thrive and grow, and which could be kept for a long time. A New Zealand scientist, now of this country, finally discovered a process which enables nitrogen-gathering bacteria to be kept alive, healthy and active for years. A medium in which bacteria will thrive was found after much experimentation, in a jelly which can be sent by mail. This jelly, which is devoid of nitrogen, is enclosed in an ingenious bottle with a glass tube through the hard rubber cork; through this air reaches the bacteria after passing through separate filters of cotton. The bacteria gather nitrogen from this air, and are kept in a healthy state. The medium is prepared in liquid form and sterilized with its rubber cork and open tube, and when it sets into jelly, a needleful of bacteria from the mother culture which was secured from a healthy plant is inserted in the jelly.

The simple process of applying this fertilizer recommends it strongly to the small as well as to the large gardener. The culture is mixed with a little sugar and water in the bottle and the jelly is shaken until it mixes or dissolves. It is then applied to the seeds, inoculating each seed with the nitrogen-gathering bacteria.

The power of these bacteria is well proved by Government and by private experiments. Farmers and gardeners in all parts of the country are employing bacteria as seed fertilizer with marked success, and have found splendid results not only in the increased growth of legumes, but in the enrichment of the soil for other crops.

Do you have trouble with your garden

Save the Dime and Jeopardize the Dollar? or, Use the Dime to Insure the Dollar?



THE short-sighted man says, "I am not going to paint my house this year. Materials are higher than they should be. I intend to wait until prices come down."

Such a man is thinking more of the dimes he imagines he may save by waiting than of the dollars he is sure to lose when his buildings depreciate. His wisdom is reckoned in dimes, his short-sightedness in dollars.

No thrifty houseowner reasons that way. He says, "My house must have the new coat of paint that is coming to it, even if the cost is four or five dollars more than usual. My house represents an investment, which must be protected. Besides, *it is our home;* we want it to look as well as possible."

Any houseowner who wants to do a little figuring should get from his local dealer prices on the following ingredients:



100 lbs. "Dutch Boy Painter" white lead -	$.....
4 gallons pure linseed oil - - - -	
1 gallon turpentine - - - - -	
1 pint turpentine drier - - - -	
This makes 8 gallons genuine old-fashioned paint	



He should then compare this with the price of any other paint he would think of using, and all the while keep in mind the superior spreading power of old-fashioned lead and oil paint.

OUR FREE PAINTING HELPS

We try to be of service to those about to paint. We will send you, if asked, color schemes, miscellaneous painting directions, and names of "Blue List" Painters in your community, men who use our "Dutch Boy Painter" white lead. Ask for "Helps No. 491." That will include everything.

TO PAINTERS: If you are a skilled white-leader and use "Dutch Boy Painter" white lead, send us your name for our "Painters' Blue List." Write us for Blue List Circular No. 491. It gives particulars.



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ANDROMEDA FLORIBUNDA, LEUCOTHOE CATESBAEI, GALAX APHYLLA, MITCHELLA REPENS AND OTHERS BEST PLANTS FOR RHODODENDRON BEDS

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Highlands Nursery (3,800 ft. elevation in Carolina Mountains.) **and Salem Nurseries**

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Hardy American Plants
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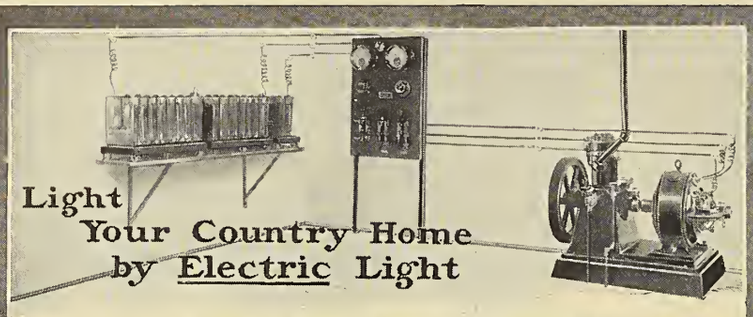
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Superior White Enemel [High Gloss Finish] - -	"	5.00

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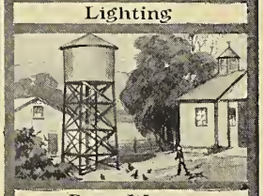
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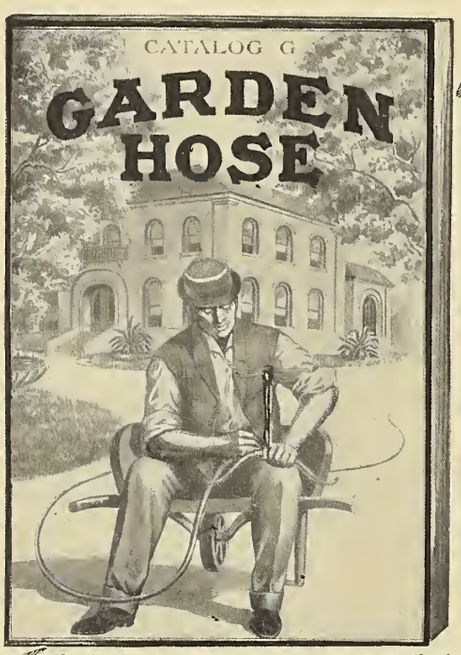
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peas or beans, or in getting luxuriant sweet peas with large blossoms? If so, it is probable that there is not sufficient nitrogen in the soil, and that it needs bacteria to fix the nitrogen in a form available for plant food. The United States Department of Agriculture says it is worse than useless to attempt to grow any leguminous crop without being certain of the presence of the bacteria which enable the plants to fix free nitrogen. This is the reason for the familiar rule against growing sweet peas for successive years in the same soil.

Most lawn seed is a mixture of various grasses and white clover. White clover is a legume, and the nodules forming on its roots will testify as to its nitrogen-gathering capacity. If the seed is inoculated with bacteria before planting, it will not only produce a good crop of clover in your lawn but will so enrich the soil that the grass seed will derive much benefit therefrom. Lawns on which the bacteria have been introduced assume a deep, healthy green color, and remain in green during the summer heat when other lawns are yellowed and dry.

The bacteria may be applied to the roots of plants already started as well as to seeds with marked success.. The experiment is well worth trying in your garden, as it has been thoroughly proven a wonderful success by practical farmers, as well as by many scientists and gardeners.

The Month's Activities

(*Continued from page* 339)

sistance of the gardener, survived these attacks, in recent years numerous fungous and parasitical diseases have come to the aid of the insects.

One of the insect pests, cut-worms, was spoken of at length in the April article. There are a few others that attack several kinds of plants: the aphis, or plant-louse, potato-bug, flea-beetle, root-maggot, white fly and white grub. (Insects peculiar to special sorts of plants, such as the asparagus-beetle, and squash-bug, are mentioned later under the special cultural directions for each vegetable.)

The aphis, or soft-bodied, small green plant-louse, is not likely to get on healthy growing plants in the field, but often puts in an appearance in time of heat and drought, when the plants are checked. Kerosene emulsion or tobacco dust, especially prepared for this purpose, will usually succeed in driving them off and destroying the older insects. The striped potato-bug, or Colorado beetle, has quite a varied diet for a strict vegetarian. Its first choice seems to be the egg-plant, and many a well started crop of this delicious vegetable has been ruined in literally a few hours by its unchecked depredations. To protect potatoes, Paris Green is still used more than anything else; but arsenate of lead, alone or in combination with Bordeaux, is now largely replacing it, mainly for the reasons that it stays on a great deal longer and will not burn the foliage, as Paris Green is apt to do. Arsenate of lead should al-

ways be used to keep the beetles off young tomato and egg plants. Where there are but a few plants to be watched, nothing is better than the old-fashioned hand-picking, but it must be done thoroughly, and all eggs, which are usually bright yellow and laid on the under side of the leaves, taken off.

The flea-beetle is a small, hard-shelled jumping-jack which attacks turnips, young cabbage and cauliflower plants, potatoes, etc. Bordeaux mixture has some effect in stopping it, and kerosene emulsion is good. Plaster dusted on the leaves affords a mechanical protection. The root-maggot, attacking cabbage, cauliflower, onions and other crops, is a small white maggot which gets into the roots and seems to sap all the strength of the plant even before it has done much eating, causing the plants to wilt down in the heat of day. Rotation of crops and well limed soil are the best preventives. Strong lime-water poured into the soil about the roots of plants, first scraping away an inch or so of the surface soil, has often checked them, but not before considerable damage is done; top dressing of nitrate of soda or guano, with cultivation and hilling, will sometimes give the plants extra stimulation enough to withstand the attacks of the maggot. The white fly, although a bad pest under glass, seldom does much damage out-of-doors. On the first appearance spray thoroughly with kerosene emulsion, and then keep the plants well dusted with strong tobacco dust. The white grub or "muck-worm" sometimes chews off the roots of plants and occasionally injures grass plots and lawns. Dig them out and kill them, and replant or resod. Fall plowing and constant cropping, in the garden, will prevent their getting a start.

SPECIAL CULTURE DIRECTIONS FOR THE VARIOUS GARDEN CROPS.

For convenience, we may class the garden crops roughly into three sections:—the root crops, such as beets and carrots; the leaf crops, such as cabbage and lettuce; and the fruit crops, such as the melons and tomatoes. This classification is merely for convenience in giving cultural directions, so we need not heed the howl of the botanist at finding onions among the root crops, and cauliflower among the leaf crops.

The Root Crops: This group includes beet, carrot, kohlrabi, leek, onion, parsnip, potato, radish, salsify and turnip. All of these are what may be termed cool-weather plants. With the exception of the potato, they can be planted as early in spring as the ground can be got into good shape, and are sowed in drills, 12 to 18 inches apart, where they are to remain, and thinned out to the proper distance in the rows after they are well up. They like a very rich, deep, fine loam, and the soil can hardly be made too rich. With the exception of the onion-maggot and the potato-bug, they have hardly any enemies. All will be benefited by one or two top-



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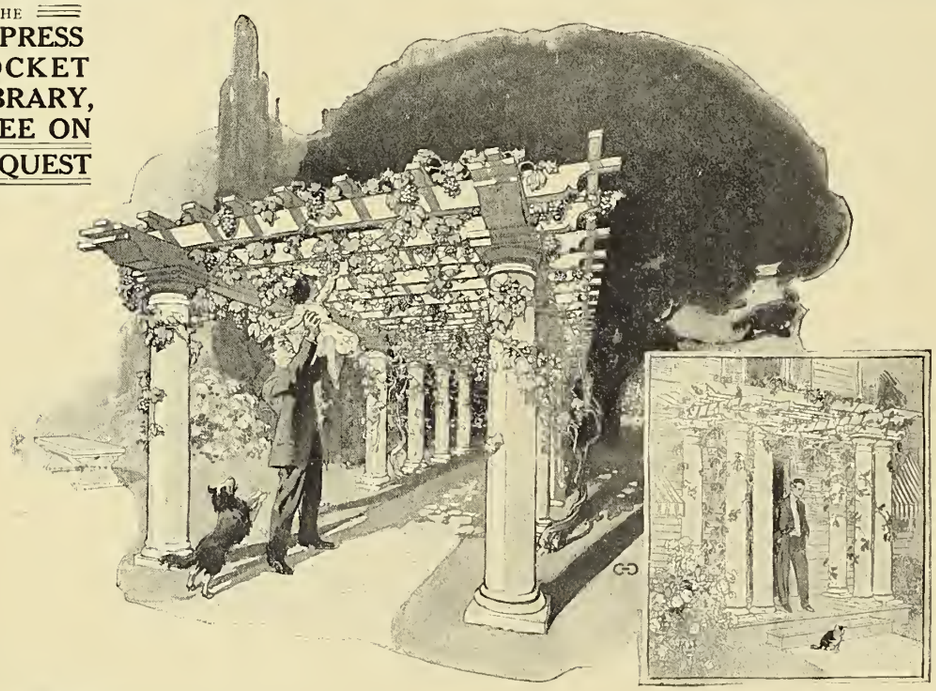
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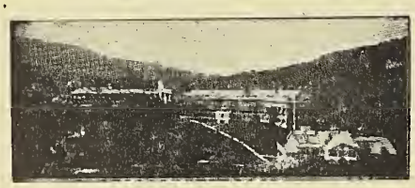
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FRED STERRY, Manager, Hot Springs, Va.

dressings of nitrate of soda during the growing season.

Beet. The first crop is started under glass in February or March, transplanted to flats, like early cabbage, and set out about four inches apart in rows. Sow from April to last of June for succession crops.

Carrot. To do their best, carrots require a rather sandy soil which should not be made too rich in nitrogen from organic sources. In other ways the culture is much the same as for beets. Extra early carrots may be had by sowing and growing to maturity in coldframes.

Kohlrabi. This vegetable, which is not as well known as it should be, is a sort of overgrown turnip. It is of the easiest culture. They should be used when not more than two inches in diameter. When once tried, I believe this vegetable will largely replace the turnip, especially for home use.

Leek. Grown similarly to onions, except that the stalk should be blanched, either by hilling up or by the use of paper collars, held in place with drawn-up earth. For early crop start under glass and set out.

Onion. By far the finest onions may be had by starting the seed under glass, as early as February, if possible, and setting out later. Trim the plants back about half, once in the seed-bed and again if they are tall, at time of setting out, at which time the roots also should be trimmed back about one-half. For the crop raised from seed, make the ground as rich and as fine as possible, before sowing the seed, and then keep the bed clean. Watch for cutworms and kill these by hand or poisoned bait. Give two or three dressings of nitrate of soda, and frequent shallow cultivation during the summer. When the tops die down and wither, pull and store in a dry airy place in thin layers. Store before severe freezing, on slatted shelves or in ventilated barrels.

Parsnip. One of the easiest of all vegetables to grow, if care is taken to have the seed-bed fine and deeply prepared. Sow about one-half inch deep. Dig part of crop very late in fall for winter storing and let remainder stay in ground till spring.

Potato. For a few extra early ones, start in flats of sand, under glass, first cutting the tubers to one or two eyes each. Main crop, plant in drills twenty-eight to thirty-six inches apart, thirteen to fifteen inches apart in the drill and three to four inches deep. Keep thoroughly cultivated and hill up moderately when buds begin to show. Spray with arsenate of lead or Paris Green for bugs and flea-beetle, and Bordeaux mixture for early and late blight.

Radish. Sow every two weeks for succession crops; work a little land-plaster into the soil at time of planting.

Salsify. A very delicious vegetable which should be much more extensively grown. Give same treatment as parsnip, a deep sandy soil if possible.

Turnip. Sow frequently, so that the turnips may be used young, as they quickly become tough or wormy.

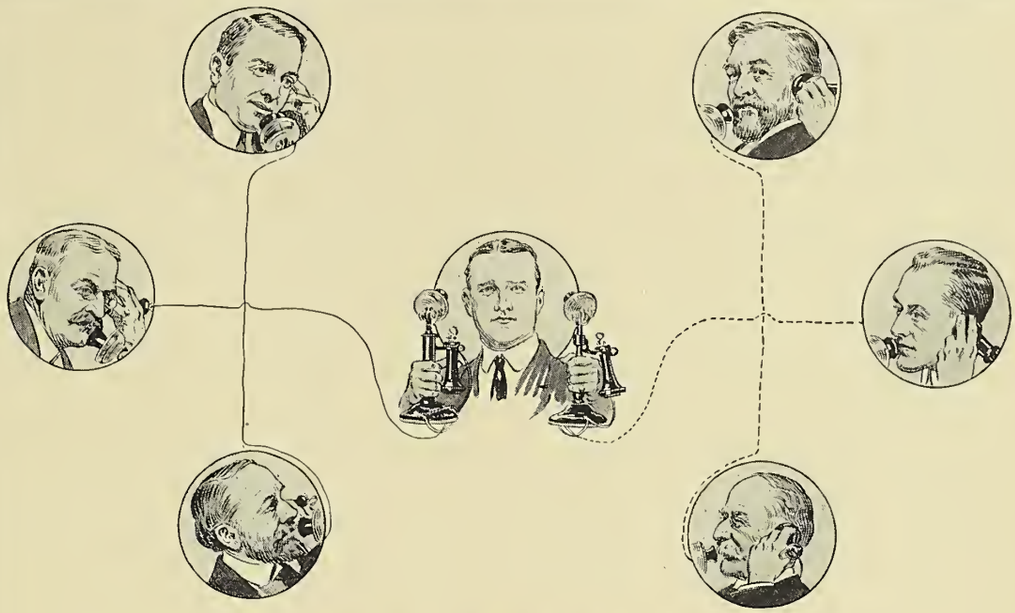
The Leaf Crops: These too are crops that do best in the cool weather of spring or fall. They also require soil that has been made thoroughly rich; especially must they have plenty of available nitrogen. Many of them will do well on soils a little heavier than those best suited to the root and fruit crops—a point to keep in mind when laying out your planting, if you have different sorts of soil. They are for the most part started under glass, for the early crops, and set out early in spring. Succession crops are sometimes sown where they are to mature, but better results can be had by starting plants in a seed-bed, thinning out properly and trimming back, and then setting out in their permanent place. What might be designated the stalk crops—asparagus, rhubarb and sea-kale—are set out in beds that last many years. They should be well enriched with old manure or fertilizer, not only early in the spring, but just after the cutting season, as the summer growth furnishes material to be stored away for early spring growth, in the succulent root-clumps.

Asparagus. Usually set out in beds, the rows being three or four feet apart, and the plants about a foot in the row. Trench out each row, unless the soil is already very rich, and put in six to twelve inches of rotted manure, cover this with soil to within three or four inches of the surface and then plant, putting the crowns level and the roots evenly spread out flat; cover in to within at least a couple of inches of the surface, and fill up level as growth starts. Usually two-year-old roots are used. Give clean cultivation and cut off and burn tops in the fall, giving a coat of rough manure. Spade in a good dressing of manure in early spring, and give a top-dressing of nitrate of soda. It is best to stop cutting in June and allow the tops to grow.

Brussels Sprouts. This is a sort of miniature multiple cabbage, easily grown. It is better in flavor than any cabbage and should have a place in every home garden. Frost only improves the hard little heads. Give the same culture as cabbage.

Cabbage. To do well cabbage demands a deep soil and heavy manuring. It is also advisable both to plant after some crop other than those of the cabbage or turnip group, and to give the ground a good dressing of lime, the fall previous, if possible. Wood ashes dusted on the young plants will be good for them and also keep off the cabbage-fly and caterpillar butterfly. Unless the ground is very rich, use guano or cotton-seed meal in the hills when setting, and at the first or second cultivating a dressing of nitrate of soda. Except on heavy land, hilling is of no benefit.

Cauliflower. Requires much the same treatment except that it must have more moisture, especially at the time of maturing. It is usually more certain, and better, for a full crop, for which it is started



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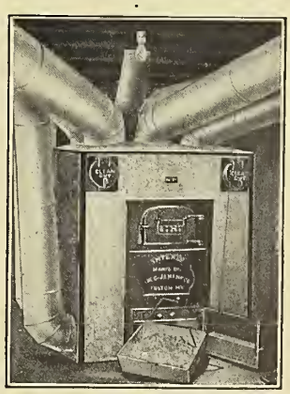
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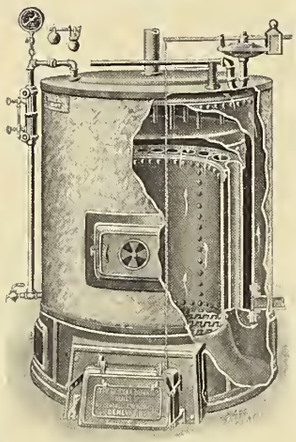
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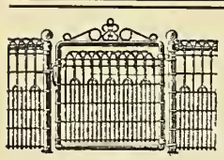
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the first part of May. Give extra manure or fertilizer just as the heads begin to show, and keep them shaded, either by tying the leaves together over the heads or putting on paper.

Celery. It would be easy to use a whole article in describing the details of celery growing, but I have space for only a few directions. In the first place, it must have moisture, either in the soil or artificially supplied. Start the seed carefully, as it is fine and of slow germination; firm it well into the soil and barely cover. For early, start in March under glass; for late, in April, either inside or out, but where it may be watered and if necessary shaded, until up. Transplant to flats. When setting out, shorten back the roots and set in firmly, just up to the crown. Give clean frequent shallow culture. Early in August bank up that to be used in September; and by August 15th hill up that for fall and winter use, and handle about September 1st to get it ready for winter storing. It is usually planted in rows two or three feet apart, and the plants about six inches in the row. On rich soil, where moisture can be supplied, it may be grown in solid beds, setting the plants eight to twelve inches apart each way, and thus letting it blanch itself.

Endive. Is grown much like lettuce, except that it is of much better quality in late fall, and needs tying up to blanch it.

Kale. Is another not frequently used vegetable. It is grown like cabbage and used for greens. Much improved by frost.

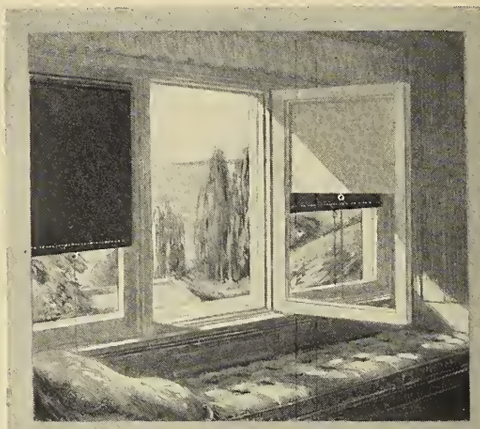
Lettuce. For first crop out-of-doors, sow under glass about February first; again March 1st, and outside April 1st. During late spring and summer, sow every two weeks for succession crops. If wanted for winter in coldframes or hotbeds, begin sowing about August 10th, using a variety suitable for forcing. Cultivate often, and use dressings of nitrate of soda to induce rapid growth, for upon this the quality depends.

Parsley. Soak the seed in warm water before planting, and sow a few radish with it to mark the rows. Will do well in partial shade. Take up a few plants and set in a box of good soil for winter use.

Rhubarb. Set out one or two roots—division of old clumps, every three or four feet in the row. Enrich liberally with old manure, as directed for asparagus. Top-dress every spring with old manure and nitrate of soda. Keep seed stalls cut out.

Sea kale. Is grown in permanent beds, like asparagus. Sow seed in drills fourteen inches apart and one inch deep. Transplant in following spring, as directed for asparagus, three feet each way. In late autumn, after the leaf stalks fall, cover each hill with a half-peck of sand and on top of this a foot or more of soil. The blanched stalks are cut in the spring, and then the earth and sand shovelled off and manure spaded in about the plants. This most delicious vegetable is not as widely grown as it deserves.

(*Continued on page* 380)



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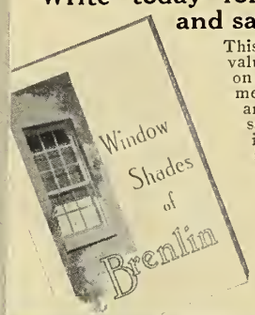
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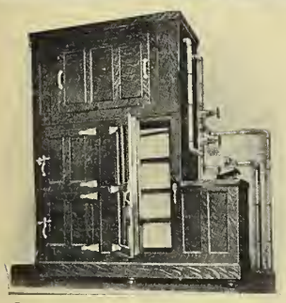
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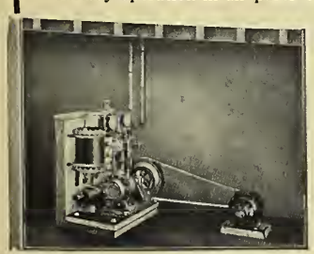
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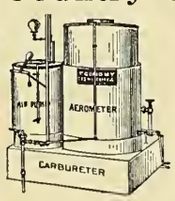
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(*Continued from page* 378)

Spinach. Is rapidly grown, either by sowing (the hardy varieties) in September and wintering over, or sowing for succession crops early in the spring and on through summer. Swiss Chard is, in my opinion, the most satisfactory spinach for the home garden. It is grown like beets, of which it is a variety. It yields early and provides continuous cuttings all through the season, of very tender, light green leaves, the mid-ribs of which are frequently used like asparagus. Do not fail to try it this year.

The Fruit Crops. With the exception of peas, and early beans, these require hot weather. Tney like a warm, light, quick soil. Nothing is gained, and everything may be lost, by trying to rush the season and put them in before the ground is thoroughly warmed up and all danger of frost is over. The soil should not be made too rich, especially in long-lasting forms of nitrogen, which will cause delay in the maturing of fruit. An application of nitrate of soda, during the early stages of growth, will give a good quick start and enable them the sooner to begin their work of setting and ripening fruit. Many of the plants in this class need special preparation of the hills in which they are to be planted or set. Such hills are made by digging out the soil to a depth of six or more inches and eighteen to twenty-four inches square, and filling in with the compost or thoroughly rotted manure, to which it is well to add half a pint of cotton-seed meal, and a few handfuls of wood ashes. Incorporate the compost thoroughly with the soil and fill in with good earth to about two inches above the general level.

Bean, dwarf. The dwarf varieties are sown in single or double drills, and like a light, or even gravelly soil, which should not be made more than moderately rich. A slight hilling will help to hold the stalks erect. Never pick, or work among them when the foliage is wet. For blight, spray with bordeaux.

Bean, pole. These should not be planted until ten to fifteen days after the first early sorts. It will pay to prepare the hills as described above, being sure, however, to use only old rotted manure. Plant a dozen or more seeds to a hill, and when well up thin out to two or three.

Bean, limas. These are the tenderest, and also the best of the beans. Wonderful improvement has been made in the bush limas within the last few years. Plant when there is not likely to be a rain within forty-eight hours, edgeways and eye down, covering with light sandy soil.

Corn. For a few dozen extra ears, to surprise your friends, start on inverted sod, cut six or eight inches square, in frames, and set out after danger of frost. Corn is often grown too thick. If you must plant in hills, do not leave over three or four at the most. An easier and better way is to plant in drills, thinning out to a foot or eighteen inches according to va-

(*Continued on page* 382)

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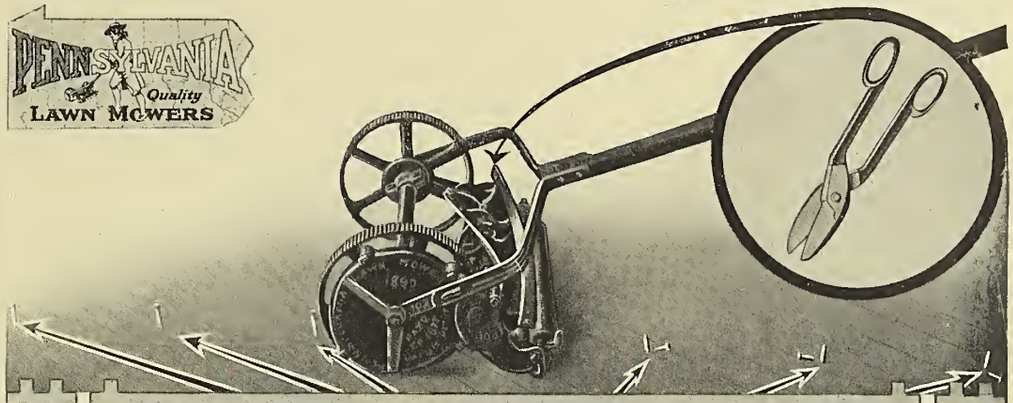
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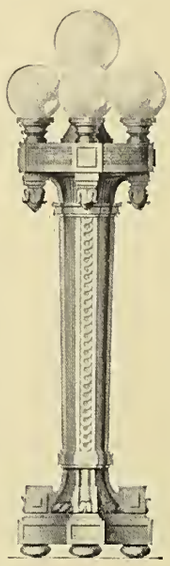


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FIFTH AVENUE & 17th ST., NEW YORK



(*Continued from page* 380)

riety. Moderate hilling is sometimes advisable, but the important thing is frequent shallow cultivation.

Cucumber. For extra early start on sods, in frames. (This may also be done with muskmelon, watermelon and squash.) Set out a week or so after it is safe to plant outside. For main lot, sow fifteen to twenty seeds in specially prepared hills. The great difficulty in growing all the vine group is to successfully fight insect enemies. The safest way is to protect them from the start by wooden frames covered with fine wire or mosquito netting. If this can't be done, watch daily for the advent of the bug army and use plaster, tobacco dust or sifted ashes, freely on the leaves before they appear. Pinch the vines back at three or four feet. Don't let weeds grow between the hills.

Egg-plant. This is the most heat-loving of all the hot weather plants, but it needs moisture too. The ground can hardly be made too rich. Keep off potato bugs!

Muskmelon. Treat the same as cucumbers. Vines may be pinched back at three feet. Thin if fruit sets too freely.

Watermelon. This belongs to the same class for treatment. Give the hottest spot in the garden. Plant early-maturing kinds, north of New Jersey. Pinch back.

Okra. Easily grown in drills. Do not plant until ground is warm. Thin out to a foot or eighteen inches.

Peas. The smooth sorts may be planted as soon as the ground can be worked. Sow in single or double drills, not more than an inch and a half deep for first planting and in light soil. For late planting sow in heavier soil and three to five inches deep. The wrinkled sorts are much the best in quality. All the tall sorts should be staked before they begin to fall over. The soil in which they are sown should never be wet, and not too rich, especially in organic nitrogen. In August, sow early varieties for a fall crop.

Pepper. Like egg-plant, they require a rich soil and moisture. Set out about June 1st, twelve to eighteen inches apart and manuring in the row if the ground is not already very rich.

Pumpkin. Treat the same as squash.

Squash. Set or plant in specially prepared hills. Protect from bugs. Hand-pick and destroy eggs, if necessary. Use kerosene emulsion for young bugs. Pinch back at five or six feet. If the vines suddenly wilt down in noonday heat, examine the stem for the white borer. Slit the stem and kill him; or pull and burn infested plants.

Tomato. Transplant twice and harden off well. Set plants in moderately rich soil, or use some manure in the hill if the soil is poor. It should be well drained and warm. If at all dry, water thoroughly at roots when setting out. Apply nitrate of soda as soon as they are established. Stake up and keep suckers pruned off. Fruits may be ripened early by tying in paper bags. If a wet season, thin out fruits that touch.



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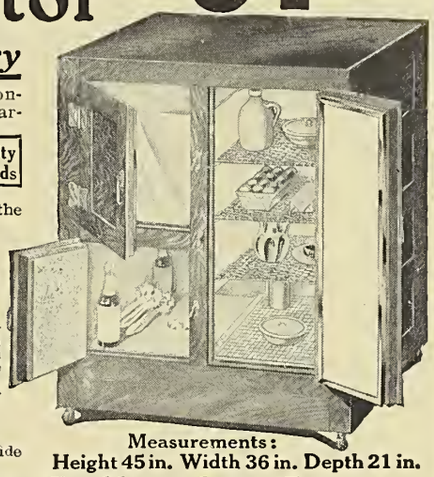
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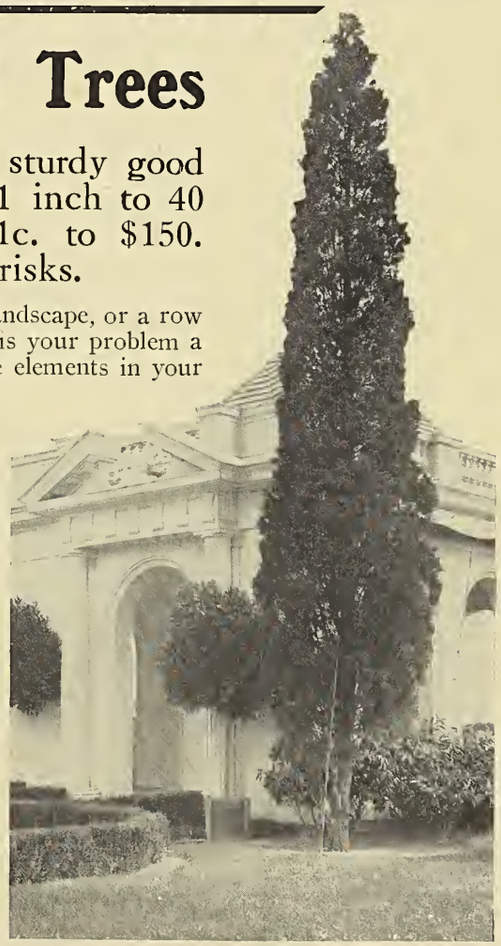
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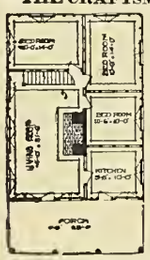
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LANMAN & KEMP, 135 Water Street New York

Grow Your Own Fruit

(*Continued from page* 352)

free of undesired sprouts as directed under pruning. Secondly, spray with Bordeaux mixture before every rain, if possible, from the time the vine leaves come out until about the middle of July. After that use ammoniacal copper carbonate. Take special pains to cover every part of the new growth upon which the fruit is borne.

Where only a few vines are grown, the bunches are often protected by covering with manila bags, put on when the grapes are well formed on the bunches. The top of the bag is slit down three or four inches on sides and ends—four cuts—at the top, slipped over the bunch, and the flaps formed by the cuts folded over the canes and pruned below the canes.

For early black sorts, Campbell's Early, Moore's Early and Worden. Concord is an old fine dependable sort. Wilder and



In pot layering the runners are rooted in pots; cut from the parent stock they are easy to transplant

Eaton are also good. Of the reds (early) Brighton; (medium) Catawba and Salem; and (late) Delaware and Ionia are fine proved sorts. The best of the early whites are More's Diamond and Green Mountain (Winchell). Niagara and Empire State are good late whites. Four or five well-tended vines will yield many baskets of more delicious grapes than you can buy. It is well worth while to grow them.

The Chrysanthemum Outdoors

(*Continued from page* 346)

Practically all the hardy border plants are better for some protection in winter in the northern States. Leaves or strawy litter, concealed and held in place by boughs of pine or spruce, should be put on as soon as the ground freezes—not before, on account of danger from mice. This should be removed in early spring. In the chrysanthemum bed the tall-flowering stalks should of course be cut off before the protecting covering is added.

After the bed has become established a light top-dressing of manure early each spring will help to keep the plants vigorous. There is often a tendency to send up too many shoots for the best results in flowers, so it is worth while to pinch out late in spring a part of the weaker ones, especially in the more crowded parts of the bed.

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The Autumn Garden of Dahlias

(*Continued from page* 360)

have not grown this flower, begin at once and you will soon be as great an enthusiast as I am. Of course dahlias take up so much room that other things are crowded out, but I always make room in my fall garden for cosmos, hardy chrysanthemums, asters, salvia, marigolds, zinnias and calendulas. The perennial asters, or Michaelmas daisies have been a joy. They grow to a height of from four to six feet and send out a shower of feathery small blossoms. I have a "golden walk," bordered on each side with dwarf marigolds in the "burnt-custard" tones, and these are backed up with a border of tall marigolds. And do not by any means forget calendulas. These should be selected in the rich orange colors. The flowers are very prolific and bloom from July to November. They spread out when cut and, put in water, last well. Generally the last dying note of color in my fall garden is a spot or two of orange where a hardy calendula has waited for a peek at the first snowstorm.

A Home of the Eighteenth Century Today

(*Continued from page* 357)

stick and chairs of mahogany, rosewood, and walnut, the clock that ticked away the hours of the entire nineteenth century—a storehouse of old furniture of England and the Colonies of all styles and makes, from delicate inlay to coarser pieces fashioned from black walnut trees that grew on the home farm. The spinning-wheel and warming-pans have found their way into the parlour; for an old house naturally tends to become a museum; fortunately so, since the spirit that prompts the conservation of such utensils and furniture insures proper respect for the house, that it be neither neglected nor disfigured by incongruous alterations.

For the Peony Enthusiast

ONE of the difficulties which the amateur has to contend with is the selection of varieties to suit his taste. The catalog photographs often strike his fancy but he finds that when his seeds have grown and his plants flowered that his results are far different from his preconceived notion of them. The safest way to do is to visit some flower show or exhibition. There are many varieties shown and one can judge of final appearances. Select for color effects, for you can see just how the plants will look when grown in your garden.

June offers exceptional opportunities to the Peony enthusiast who lives within touch of Philadelphia, for the American Peony Society is undertaking to hold its annual exhibition there. For some time past the Society has been working to show the value of the Peony as a decorative plant and to obtain a proper classification

(*Continued on page* 388)

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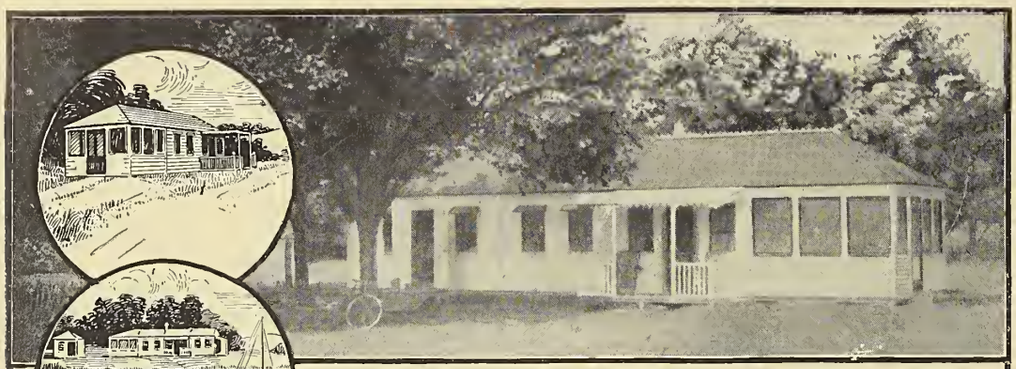
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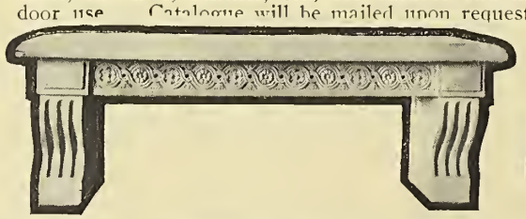


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GALLOWAY TERRA COTTA CO.
3218 WALNUT ST. PHILADELPHIA

(*Continued from page* 386)

and nomenclature of varieties. With this end in view, several thousand plants have been set out at the Cornell Agricultural College. This collection will be seen at the Philadelphia exhibition and will give any one interested an opportunity to find out what plants he wishes to buy and what striking effects can be made with them.

Old English Glassware

[This is the second short article by Miss Northend about old glassware. The first one appeared in the March number, a third will follow in an early issue. —ED.]

IN England the collector does not speak of tumblers, but he displays his "toddy glasses," which are the ancestors of our



Three typical examples of old glassware in the Waters' collection. The glass with the cover is a "toddy glass"

modern tumblers. One of these "forebears" is carefully housed in one of Salem's fine, old Colonial mansions, where, with many other heirlooms, it rests in huge closets in the dining room. Much of this collection shows the lifelong work of Mr. Fitz Waters, and forms with the Waters' family collection a wonderful combination of old glass, representing not only different periods, but countries as well. An illustration shows Mr. Waters' toddy glass in



Glasses in the West collection that are early examples of stem cutting and are dated about 1800

the centre. Also three glasses in this group are elaborately engraved.

Another interesting collection is that of Mrs. William West. The three wineglasses belonging to her are part of a set originally in the possession of Nathaniel West, one of Salem's noted merchant princes. The cutting on the stems indicates that they are probably dated about 1800.

More of the same glass is shown below. These glasses are of unusual shapes, and the bird and shield design, also the wreath and flowers of the centre goblet, are re-

(*Continued on page* 390)



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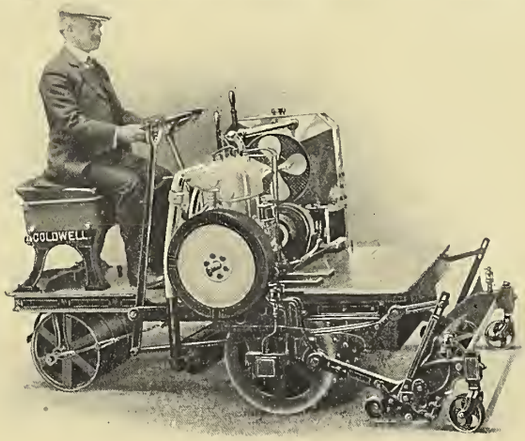


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Pat. March 8, 1910

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(Name stamped indelibly on every foot)

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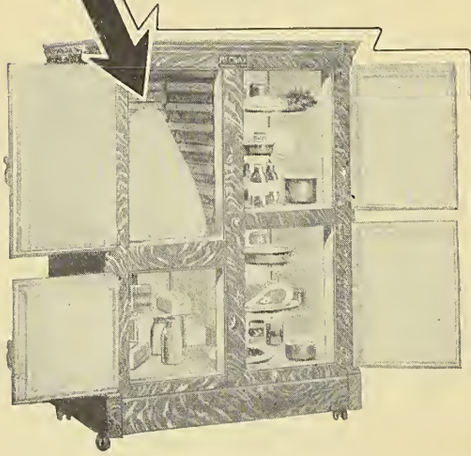
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293 Lake Street Kendallville, Ind.
Display Rooms and Agencies in all Principal Cities

(*Continued from page* 388)

markably clear. The cut stem of the right-hand glass dates its age as being about eighteenth century. Two glasses in this collection which are known to be equally old are shown also. The glass at the right is of the group designated as "White twist stems;" a stem which was the result of some particular process, and marks the date of the two right-hand glasses as being A. D. 1745 and 1757. The small bubble of air in the stem of the glass on the left is known as the tear-drop. This is common in eighteenth century glassware



Unusual shapes with remarkably clear decoration, from the West collection

and is one of the marks which prove it genuine.

From England and the stage coach era we in America are indebted for much old glass. "Runners," a queer kind of goblet prevalent at that time, ale glasses, mugs and decanters, originated with the public ale houses and taverns, where our English ancestors held their noisy revels.

The Scotch also bequeathed us some odd shapes. One is a strange little glass, funnel-shaped, and four to six inches high;



Very old glasses with characteristic marks; on the left is a "tear-drop" stem, on the right a "white twist"

instead of the usual foot, there is only a round knot, so that the glasses stand only when upside down.

Let us go back in fancy to the youth of this glass. When the coach drew up to the door of the inn, a servant would rush out with a trayful of these "knobby" glasses which were quickly filled, and as quickly emptied; afterwards the coach would roll on without delay. Another Scotch specimen had a very heavy "foot," in order that the vigorous roisterer could applaud a toast by a bang on the table.

Now a word about the value of old glass. Many times it does not range so high as that of china, and often an old cut piece will

(*Continued on page* 392)



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(*Continued from page* 390)

not cost as much as a modern, heavy piece. Recently a beautiful pair of cut glass bonbon dishes were marked $28; $50 would have been reasonable for them. Generally such pieces as are illustrated here would fetch from $15 to $20, and occasionally, beautifully cut pieces can be purchased for $25. One pair of late eighteenth century cruets were marked recently at $4.50 each; tumblers of the early nineteenth century may sometimes be found for $2.

MARY H. NORTHEND.

Making a Rose Garden

(*Continued from page* 335)

country. In Dr. Huey's experience, roses that are budded on these stocks will thrive much more luxuriantly and give much better blooms than those which depend upon their own root systems. It is necessary, however, to set the point where the shoot is budded to the stock about two inches beneath the surface; otherwise there is the constant danger that suckers will spring from the root and, if overlooked for a time, these will kill the more desirable shoots.

A word of warning might profitably be uttered against the cheap roses budded on "Multiflora," grown in Holland and sold in some of the department stores. They are short-lived and very poor in comparison with plants on brier and Mannetti. Multiflora has been entirely discarded as a stock by English and Irish growers.

Roses on their own roots have the advantage of being cheaper—one-year-old plants costing a dollar for six to a dozen; two-year and three-year-old bushes which are, of course, far more desirable, cost more in proportion.

Now as to the preparation of the rose bed itself. First of all dig the soil out to a depth of two feet at least, keeping the top soil and sods and the sub-soil in separate piles as they are taken out. Loosen up the floor of the trench with a pick and on this, if the ground needs draining, put a layer of stones, cinders and other material that will not decompose. On top of this place the best of the sub-soil mixed with a generous dressing of well-rotted manure. Finally add the sod, well broken up and the top soil, also enriched with manure. Then fill in the bed with enough good top soil, unmanured, to bring it two or three inches above the adjoining surface. Make sure that the surface of the bed, after it has settled, will be about one inch below that of the adjoining sod in order to retain the moisture from rain. This preparation of the bed should be done at least several weeks in advance of planting time.

In composing the soil for the rose bed, it is well to remember that the Hybrid Perpetuals require a heavy soil containing some clay. For Teas and Hybrid Teas a lighter, warmer soil is better. The top soil from an old pasture, taken with the grass roots and chopped very fine, will do excellently for the Hybrid Perpetuals. Mix

(*Continued on page* 394)

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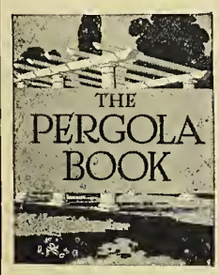


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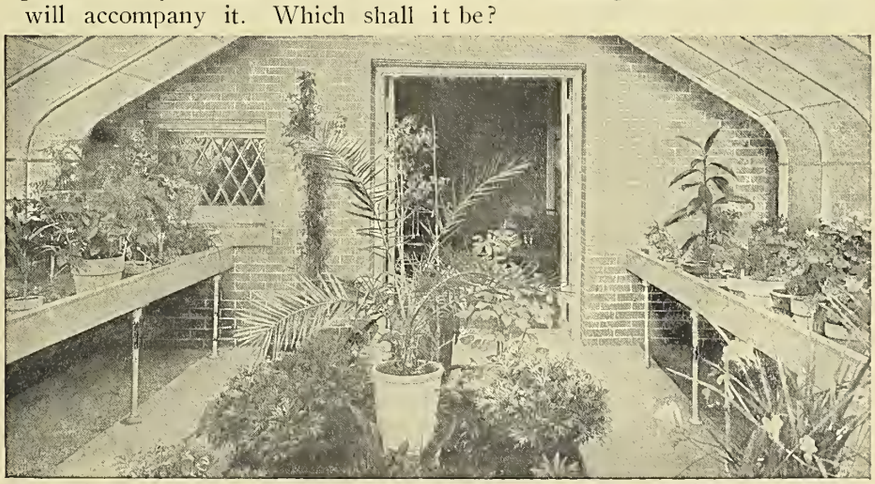


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(*Continued from page* 392)

with soil of this kind about one-quarter of its bulk of sand and leaf mould to lighten it for the Teas and Hybrid Teas. Remember, also, that all the manure that is used should be incorporated with the lower two-thirds of the bed; the upper third should not contain any recently added manure as it is apt to harm the roots of new plants.

Before setting the plants examine each carefully and cut off the broken roots with a sharp knife as well as all eyes that may appear on the root stock, in order to forestall suckers. The plants should be set immediately upon their receipt from the nurserymen so that they will not become dried out. If they seem dry it may be well to puddle the roots in thin mud just before setting. Make the hole large enough to accommodate all of the plant's roots without crowding, remembering to put the budding point not less or more than two inches below the surface and with the roots spread out nearly horizontally, but inclining downward towards their ends and without crossing one another. Above all, see that the plant is firmly set into its site, using the balls of the feet to accomplish this. After the plants have been set, rake the soil to loosen it up over the whole surface.

If this planting has been done in the fall a top dressing of about three inches of rough manure should cover the whole bed and the long wood of the bushes should be cut back to about one foot in height. If planting in the spring, this wood should be cut back to leave but two or three eyes, and, of course, the top dressing will not then be put on.

Pruning may be started with the dwarf Hybrid Perpetuals in March—leaving four or five canes three feet in length if large masses of bloom are wanted. The result will be a large number of small flowers. If, on the other hand, fewer and larger flowers are wanted, all weak growth should be removed and every healthy cane retained and cut back in preparation of the plant's development. The weakest should not have more than four inches of wood left on the root, while the strongest may have eight or nine inches. Always prune a cane about a quarter of an inch above an outside bud unless the cane is very far from the vertical, when an inside one should be left for the terminal shoot, and see that the wood is not torn or bruised in the operation. The pruning of Hybrid Teas and Teas had better be postponed until the first signs of life appear. The bark becomes greener and the dormant buds begin to swell. Dead or dying wood will then readily be noticeable and it may be removed. These two classes do not need such severe pruning as do the Hybrid Perpetuals. Twice the amount of wood may safely be left if it seem promising.

If you have planted your roses in the fall, remove the mulch of rough manure just before growth starts in the spring. Dig in with a spading work all the fine particles of the mulch that remain, but do

(*Continued on page* 396)

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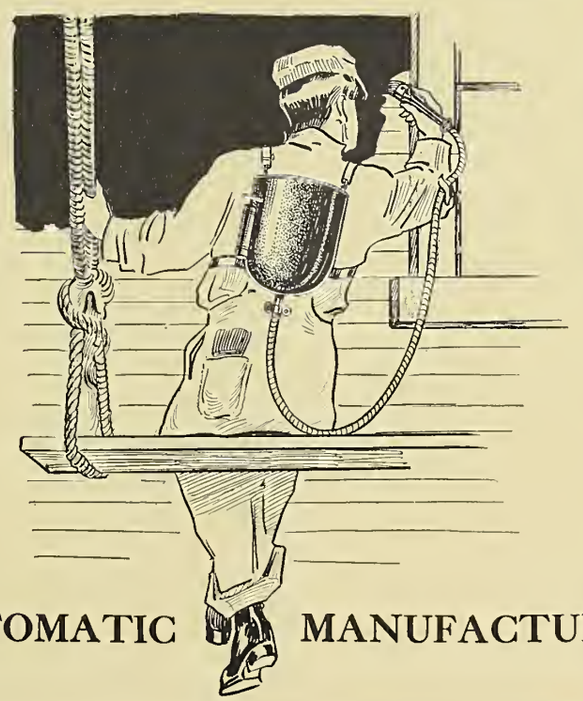
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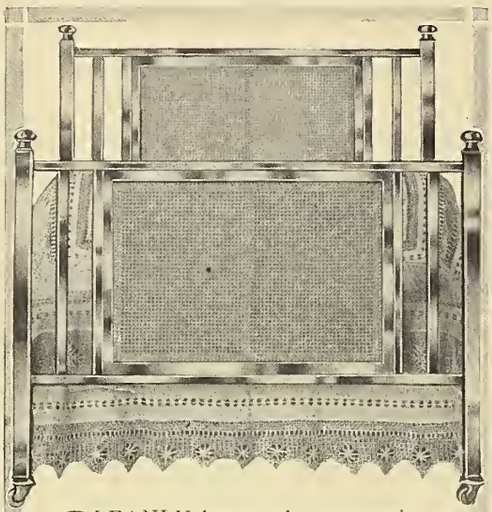
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(*Continued from page* 394)

not cultivate too deeply or the roots will be damaged. Three inches in depth is sufficient cultivation for a bed that has not been trampled upon. It is absolutely essential to keep the surface of the ground loosened with a hoe and a sharp steel rake throughout the summer. After every hard rain loosen the soil as soon as it is dry enough to work, to conserve the moisture. Give a stimulant of weak liquid manure—a half gallon poured around each plant weekly from the time the flower buds begin to form until the plant ceases to bloom. This stimulant is particularly appreciated just before a rain, for it will then be washed down to the lower feeding roots. Give this liquid manure in weak form and often rather than once in a longtime at greater strength. Half a bushel of cow manure to a barrel of water is just about right.

The bushes will appreciate the refreshment that a fine spray hose will give, and incidentally this is one of the most efficient ways to keep plants free from their enemies.

Certain varieties of roses form large clusters of buds at the ends of the leading shoots. If all these are allowed to develop the vigor of the plant is distributed among them with the obvious result of smaller flowers. If you would rather have one really fine bloom on the end of each shoot, retain only the most promising bud, pinching off the others as soon as they appear.

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Aside from having the necessary food elements, the soil should be moderately moist and of the yielding consistency characteristic of loamy soils well enriched with manure or the humus of some green crop like clover. The soil should offer the least resistance to the tubers in the expansion of growth.

Early potatoes are planted as early in the spring as the ground can be made ready. There must be sufficient room between the rows to admit of cultivation and the growth of the vines without interference—say about three feet for larger areas where a horse cultivator is to be used and for garden cultivation thirty inches. The seed should be planted at least four inches deep for proper development of tubers.

(*Continued on page* 398)

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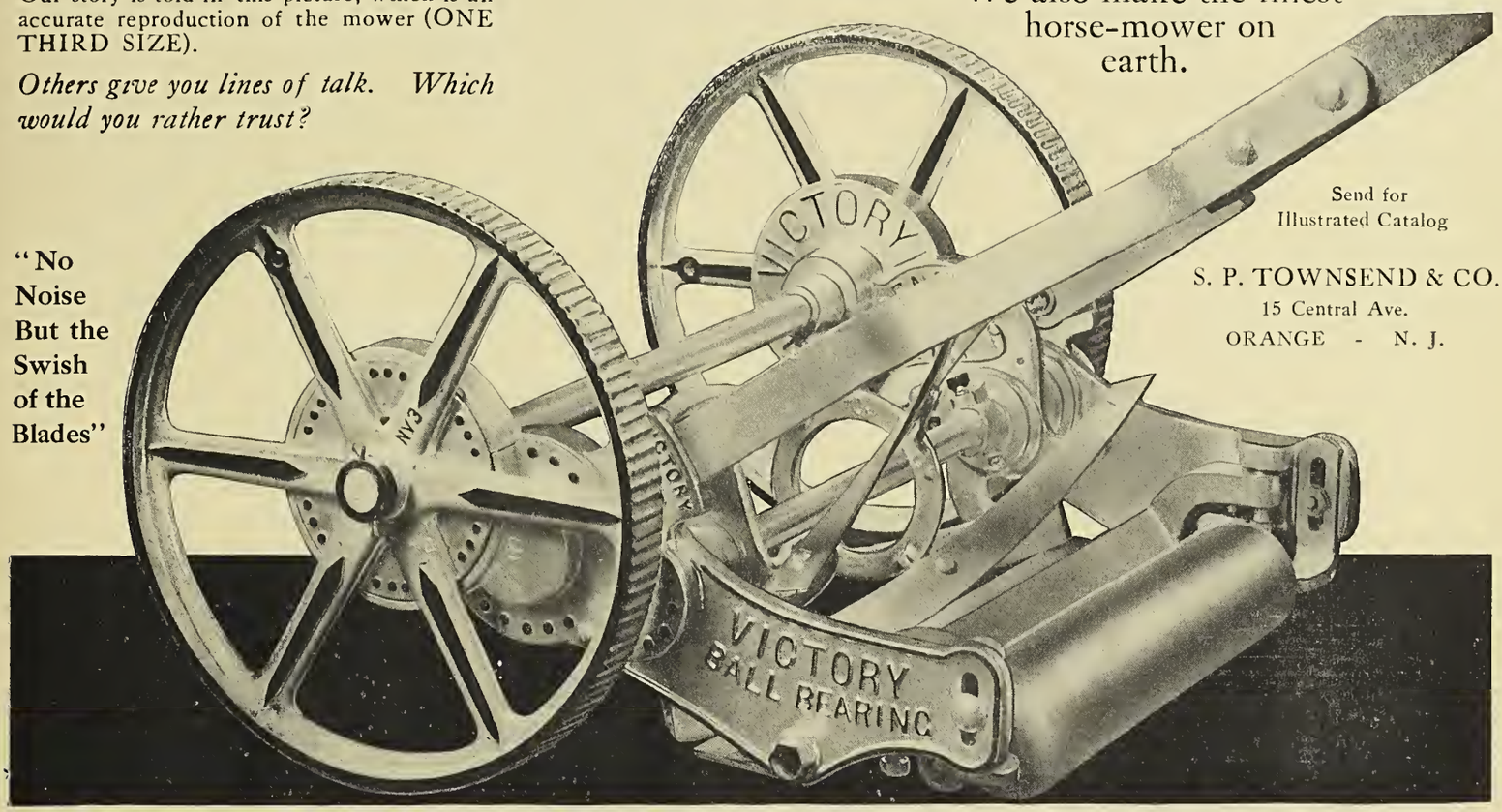
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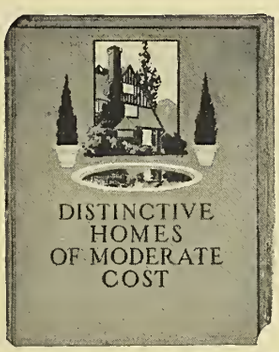


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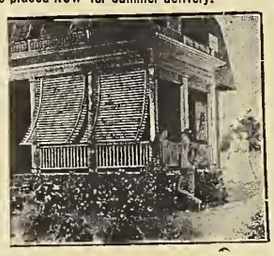
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Outside View


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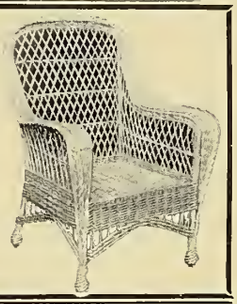

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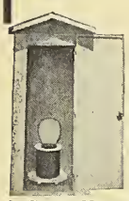
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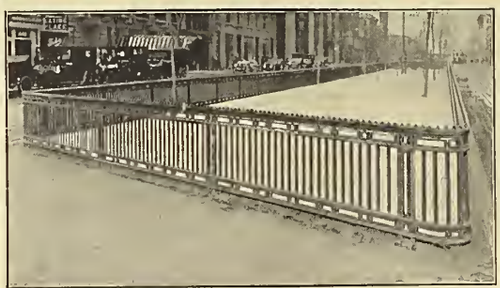
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(*Continued from page* 396)

The potato is grown true to parent stock from the eyes or sprouts on the parent tuber; hence for planting, potatoes are cut into sections having one or more eyes. The larger the portion of flesh about the eye, the better the chance of growth, as the tender shoot depends entirely upon this for its nourishment until it puts forth rootlets.

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Select clean, unsprouted potatoes for seed, such as are free from scabby or rough skin. This condition is due to disease and is transmitted to the new crop.

It is of the utmost importance to have the soil very mellow well below the tuber. Make deep furrows, sow the fertilizer, cover slightly and drop the pieces about one foot apart. Cover, and cultivate the crop on a level for six weeks. After that hill them slightly.

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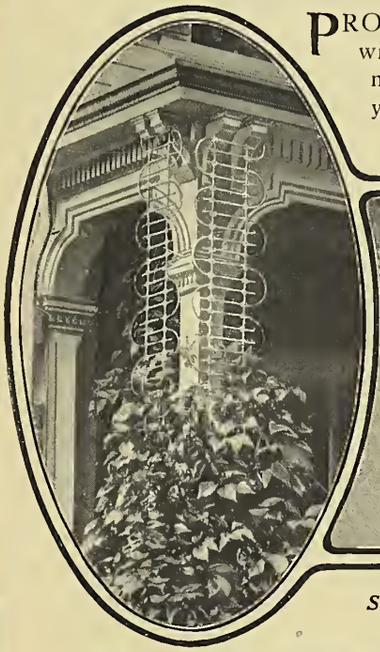
This year we have, besides rose cuttings, wegelia, cape jessamine, hydrangia, fuchsia and different kinds of geranium cuttings, all green and flourishing.

Of course, in the north where the ground freezes to a depth of several feet

(*Continued on page* 400)

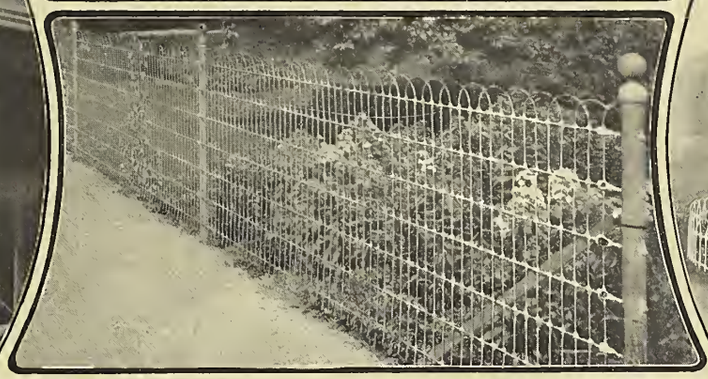
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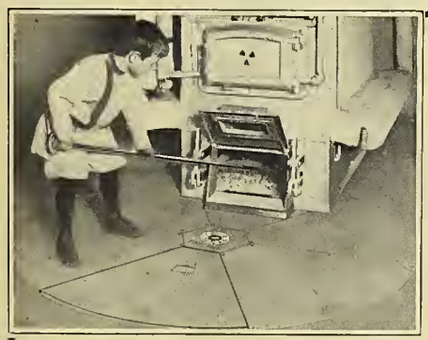
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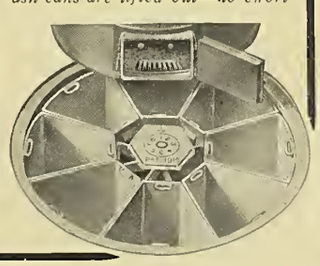
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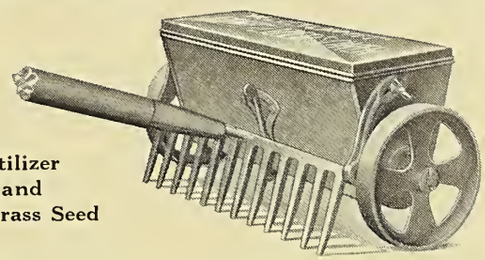
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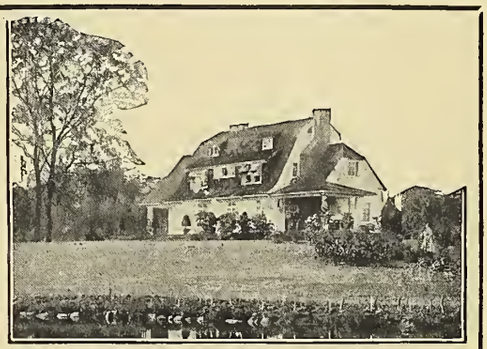
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(*Continued from page* 398)

and remains so for months, this method would not be practical, but from the Ohio River down it is the safest and least troublesome way to root cuttings for spring planting. BELL BAYLESS
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Book Reviews

[*The Publishers of House and Garden will be glad to furnish any books desired by subscribers on receipt of publisher's price. Inquiries accompanied by stamp for reply will be answered immediately.*]

Agriculture and Its Needs. By A. S. Draper, L.L.D. Cloth, 16mo. 92 pp. Syracuse, N. Y.: C. W. Bardeen.

This little book is a reprint of Dr. Draper's address before the New York State Educational Association, and will be attractive to everyone interested in the study of agriculture in its relation to our educational progress. There is much that bears strongly on the questions of the day besides adding new thoughts to the place agriculture should occupy in the future.

The Science of Living. By W. S. Sadler, M.D. Illustrated. Cloth, 16mo., 420 pp. Chicago: A. C. McClurg. $1.50 net.

Dr. Sadler's book is written mainly for the person who is well and wishes to keep well. His rules for health are happily free from faddism, and are based on sound physiological reasoning.

Rural Hygiene. By Henry N. Ogden, C.E. Cloth, 12mo. Illustrated. 434 pp. New York; The Macmillan Company. $1.50 net.

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The Garden and Farm Almanac. Paper, 8vo. Illustrated. 222 pp. Garden City, N. Y.; Doubleday, Page & Co. 25 cents.

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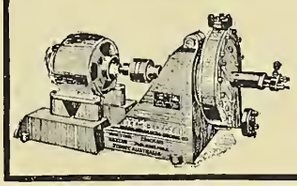
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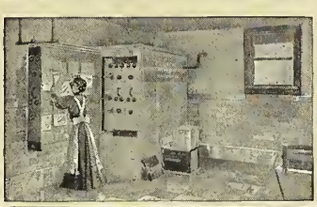
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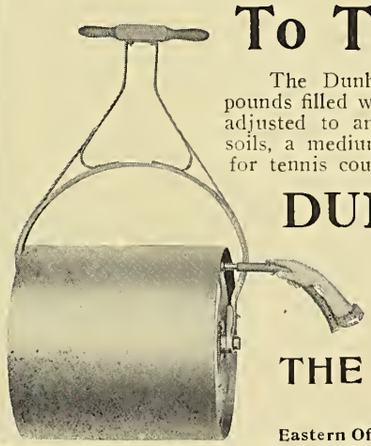
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Proper Treatment for the Dog

THERE are other requirements than severity for the proper training of dogs. In a sense we have certain obligations toward him and to fittingly discharge them we need three essentials: justice, sympathy and common sense.

Play fair with your dog. Don't forever require him to adjust himself to you. Occasionally see how it seems to adjust yourself to him. Study his characteristics, racial and personal. If he is a St. Bernard, don't treat him like a Poodle; if an Irish setter, don't try to make a Great Dane or a Collie out of him. Learn the leanings of his race, and his own preferences,—for he has preferences. Allow him their luxury. If he loathes carrots, for instance, and loves cabbage, make the dicker with him, and then don't feed him cabbage ad nauseum. If he should later turn to carrots, respect his palate. Perhaps he rejects something essentially needful: mix it artfully with something he won't reject,—you yourself like your quinine in capsules or your pills sugar coated.

If you can, get your dog young,—the younger the better,—that you may train him up in the way he should go; and be sure you know that way yourself. Nothing is more imitative than a puppy. If you want him intelligent, show intelligence yourself. Nor can you expect him to be kind, affectionate, courageous, well bred, unless you set the example. Remember, to the depths of dogs' honest, loyal hearts, they are anxious to please; you must show them how. Cleanliness, for instance, is the first lesson. Don't go about it spasmodically. Watchfulness, in order to rebuke at the *proper* moment is necessary. A smart little slap on the body,—never on the head,—as you "scoot" the culprit out the door, teaches in no time that always, under such circumstances, his place is outdoors. A puppy reasons like an infant,—no more, and equally, no less.

And in this matter of cleanliness, don't put it all on the dog: do your part. See that there is always an abundance of clean drinking water in a clean dish. If you feed him scraps, let them be clean scraps,—no tainted meat, no withered, half-decayed vegetables, in any unclean old dish, or tossed down carelessly in any old place. What kind of a gentleman of his breed would you expect to rear that way? This is a hard and fast axiom: Treat a dog *as* a dog, and he will always *be* a dog: treat him as one gentleman treats another, and he will be a gentleman. Perhaps you are feminine: even so, be a "gentleman," just the same.

Reprimand him at the proper time; praise him at the psychological moment. Above all, don't yourself, nor allow others, to tease him just for fun. It will not be so funny when his temper is ruined like overhammered steel. Don't break that temper. Nobody wants a sullen, surly dog, nor that sadder thing still, a frightened, cringing one. He will be glad to recognize you as master just when you have demonstrated

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your fitness for that role, for, remember, his intelligence is high.

If you must have a kennel for him don't go on the "anything will do for a dog" principle. Build with humanity and common sense, and employ those materials that make for sunshine, fresh air, protection from draughts and safety from damp. As well try to grow a sunflower in a cellar as neglect any of these essentials for his health. Give him a house, not a hovel. Manage to have a window for him, a good tight roof, tar papered, and a sleeping bench, if only made from a pine dry-goods box,—pine is good, by the way. And in winter, a bed also, and not of straw, unless you want it to gather flees. Hay, dry and sweet, with a liberal mixture of *pine* shavings is about right, and if he is a long coated dog, a blanket over this mattress. Then, having made his bed, take it apart with pleasing frequency. Give him the same self-respecting feeling that we have with clean sheets.

Clean *his* house frequently, as well as your own. Let his domicile have the weekly Saturday scrub with hot water, plenty of tar soap, and creosol. Scatter moth balls about and fumigate. Sulphur is good for this, also permanganate of potassium. If you haven't time, nor means, nor inclination for all this, don't keep a dog. If you have one, get rid of him. Sudden death would be more humane than lingering disease, and damp and dirt, dark quarters and defective ventilation spell nothing but disease.

As for exercise, remember the Creator gave him four legs with which to run: don't skimp the Lord's intentions any more than you have to. In the country it's all right—but what of the poor city chap! Well, let him run, poor beastie, if it's only on a rigged up trolley. There's always a way with a will. "Sir Highball," my Scotch collie, from three months till ten, was condemned to a New York hotel. Every morning (it was winter) with wide opened windows I ran up and down that suite of rooms for an hour, he prancing at heel, or running with my bathrobe fast in his mouth. To this day,—he is now a splendid three-year-old,—whenever he sees me in a bathrobe, he promptly annexes his end of it. It was fine sport, health, exercise and appetite for dog and master. It was bad for nothing but the bathrobe.

Look to the hygiene of your dog: he will take care of his health himself. Don't feed him, in season and out. Let him know when to expect his meals, and don't aggravate his appetite and temper any more than you want the cook to vex yours. For the small puppy, "feed little and often," is the golden rule. After ten months, three times a day feed milk, and at night, a regular feed. Do not neglect the incessant warfare with that vile foe of the canine race,—the deadly worm. This parasite slays by his thousands, and he is a regular Herod for the young and tender. "Oh," said a friend of mine, "my dear little puppy eats so queerly, sometimes he simply gorges, and then he won't eat at all, and he seems





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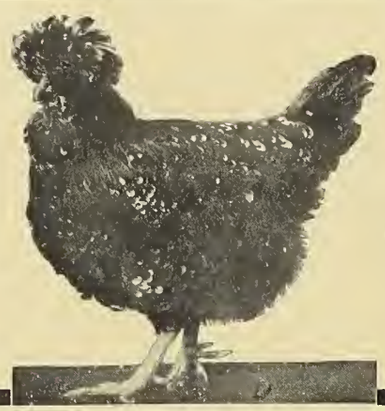
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to be going into a decline." "Get a worm medicine." I advised. A few weeks later I met her "Oh," she said again, this time with tears in her eyes, "my dear little puppy is dead." "Did you give him the worm medicine," I asked. "N-o," she replied. "I neglected to get it. But he didn't die of worms, he died of convulsions." Foolish woman! Capricious appetite, emaciation, convulsions, paralysis,—they are all the work of the noxious worm. A good vermifuge is of more value, often, than a Blue Ribbon.

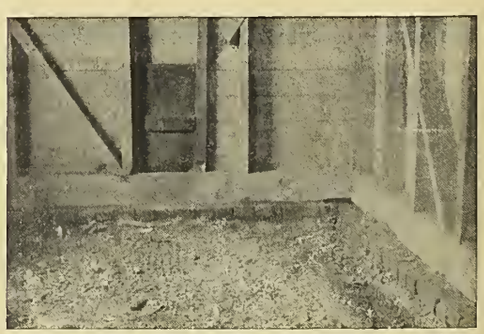
There are dogs *and* dogs. Canines vary as much as humans. A litter of puppies will be as different as a family of children. Recognize your particular dog's limitations, independent of your neighbor's, and be lenient. Equally recognize his capabilities, and give credit. When all is said, he is less than human in so little, and above the average human in so much,—loyalty, faithfulness, unselfish devotion, that, striking an average, we will find ourselves honored by his friendship (beware of him whom no dog likes) and blessed in his affection. So that, if we are possessed of conscience and sensibility, we will come to bestow as much though upon what our dog thinks of us, as what we think of him. When we reach that point, then, and not before, are we worthy to really own a dog.

EILEEN MORETTA

The Floor of the Poultry House

THE floor of the poultry house sustains as important a relation to the health of the fowls as any other part of the building. A cold, drafty floor is a constant menace, inducing catarrhal affections, and a damp floor with its constant evaporation of unwholesome moisture is equally unfavorable.

The floor of the building bears a close relation to the foundation; indeed, its character is actually determined by the kind of foundation used. From this relation have developed three distinct styles of flooring:



An earth floor lower than the outside surface is cold and damp

The earth or cement floor with the brick or stone foundations; the board floor with a foundation, and the board floor without a foundation, the structure being supported on posts.

Any one of these can be made a success if its peculiar requirements are complied with.

The board floor with a foundation makes a warm floor, but it is not durable over a perfectly tight foundation, which tends to induce rotting from the dampness of the soil beneath. To insure against this, openings should be left in either end of the foundation—openings about the size of a brick's end. In a long building, such openings should occur at intervals of ten feet.

Such places are an invitation to rats, however, and should be securely protected by heavy, close-meshed, galvanized wire.

The flooring must be so tight as to prevent drafts coming up through it. In the case of the board floor without a founda-



The flooring must be perfectly tight to prevent drafts coming through it

tion, the building rests upon posts and some poultrymen leave the space beneath open so that the air sweeps through beneath it. Others board up the windside. Such buildings should never be boarded all the way around, however, as rats will burrow beneath or gnaw through, giving a great deal of trouble.

A warm floor is secured by laying it double with an airtight interlining of roofing paper or similar substance.

An earth floor or one of cement is cold and damp if lower or even level with the outside surface of the ground. It should be at least six inches higher, and to render it dry, a layer of stone several inches deep should be placed in beneath the six inches of earth.

All floors must be cleaned frequently, fresh litter being placed in all scratching rooms, and sunlight be allowed to stream in upon them.

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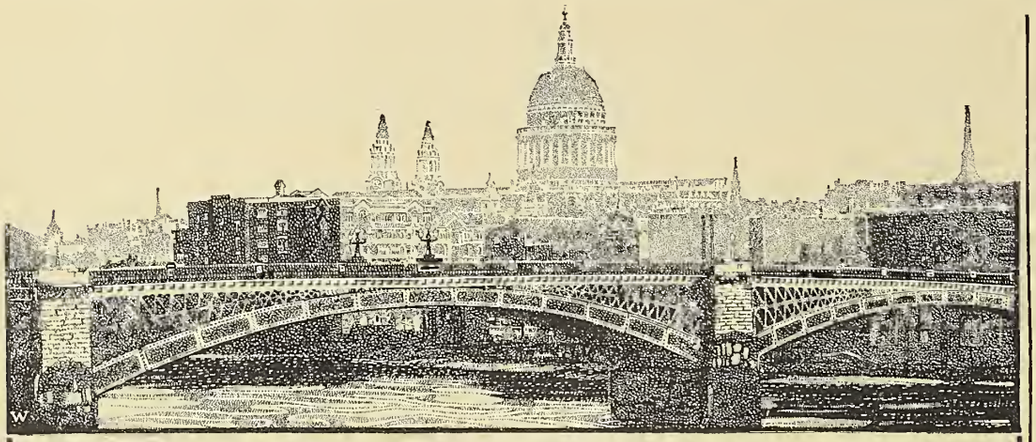
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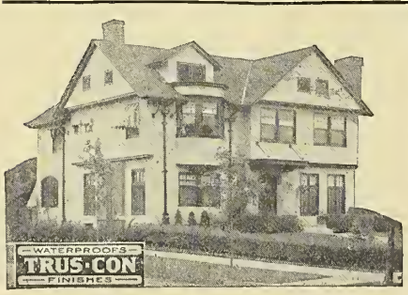
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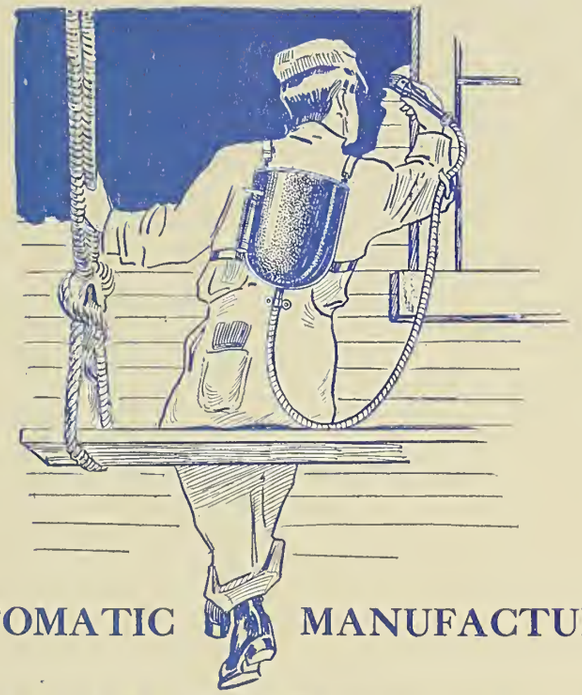
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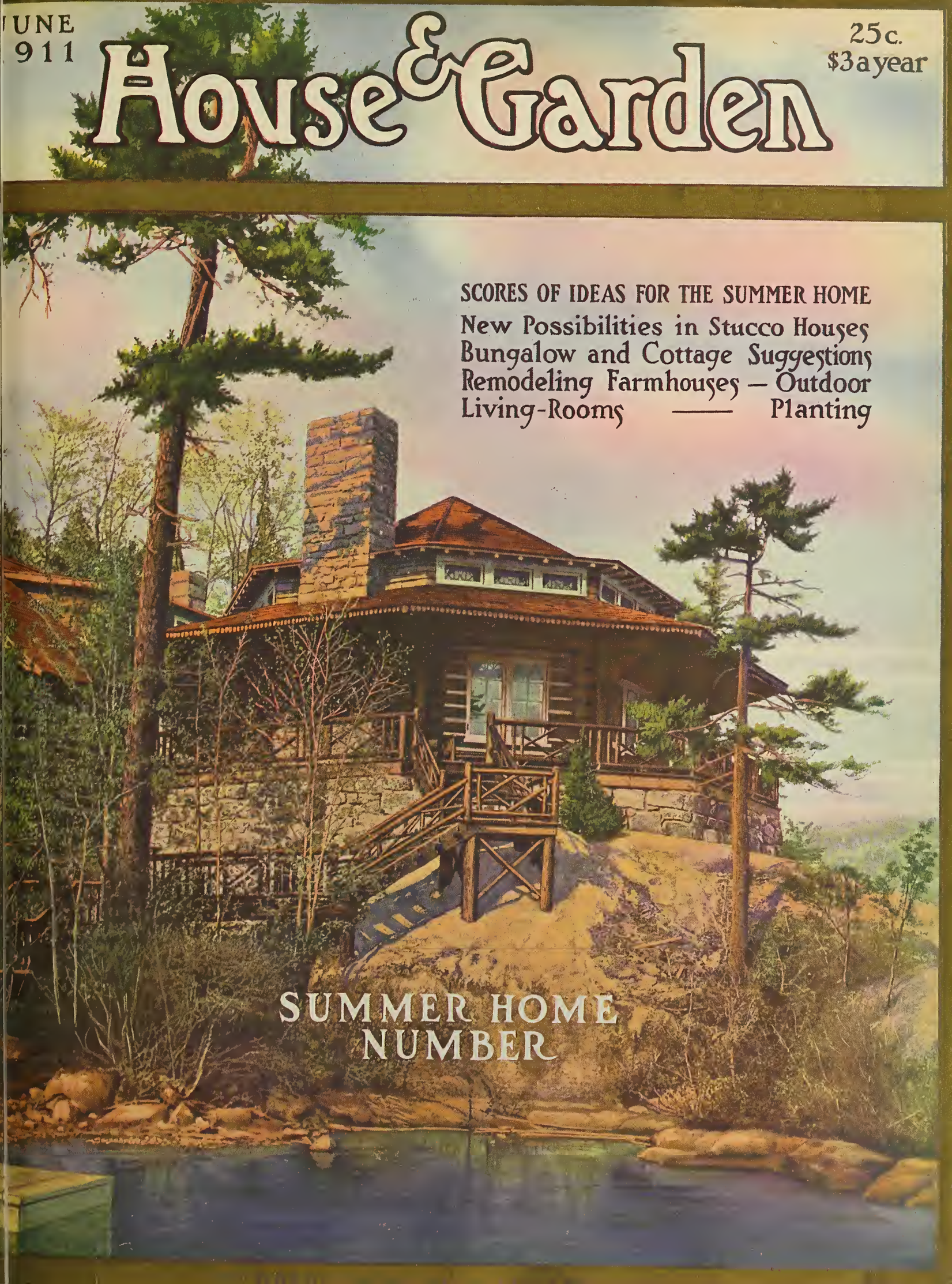
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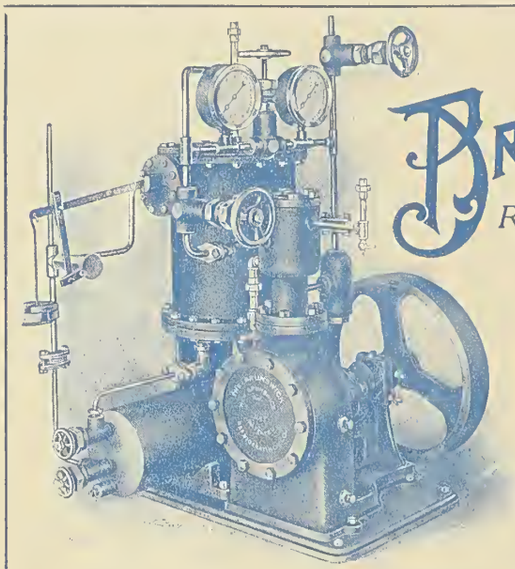
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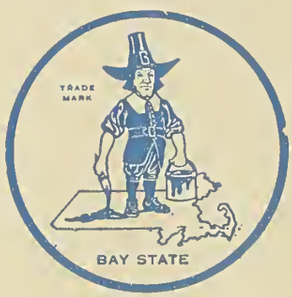
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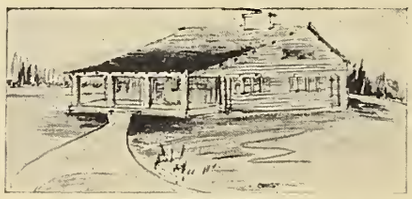
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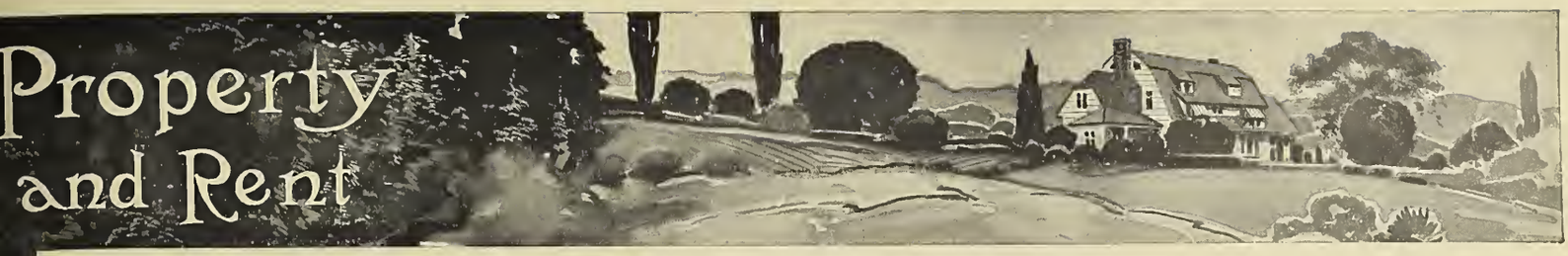
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New Ideas in Feeding

THERE are many new ideas in feeding poultry. For years we have been taught that it was necessary to feed our biddies at least three times a day. It got to be a moss-grown habit with us all. But the other day I visited a poultry plant where the chickens, since they were eight weeks old, had only been fed once a week. Such pullets and cockerels I never saw: large, mature, full-feathered; a healthy, vigorous lot. It was a sort of revelation to me.

When these chickens were eight weeks old they were put into colony houses in flocks of twenty-five. A sufficient supply of dry mash and a supply of wheat and cracked corn were provided in feeders to last a week or more. A fresh supply of water was provided daily. The youngsters were allowed free range and to forage at will. When hungry they would know where to find their food.

The chickens have done so well under this method that it is to be recommended to poultry keepers who have free range for their flocks. A. G. S.

Treating Roupy Fowls

ONE of the most severe diseases which visits the poultry yard is that virulent affection called roup.

The disease becomes visible in the throat, nostrils and head of the fowl. If the throat is affected the bird shows great difficulty in breathing, and if the mouth be opened, an accumulation of hardened matter may be seen at the base of the tongue. This must be removed with a slender stick or feather quill, or the bird will suffocate in a few hours.

When it attacks the head or face, the parts often swell, closing the eyes and nostrils and discharging offensive matter—its most contagious form. Large warty excresences may appear near the nostrils, ears or above the eyes. The various forms of this disease are usually present in a roup-infected flock and seem to be determined by the individual susceptibility of the birds.

Roup is induced by unclean quarters, impure water and association with ailing birds. The disease becomes apparent in infected birds when they are exposed to dampness or draft.

When a roupy fowl is discovered, remove it from the flock, also removing all known causes. Use disinfectants freely—carbolic-acid in the drinking water; about five drops to four quarts of water. Saturate a cloth or sponge with water, sprinkle it liberally with the acid and hang it in the hen-house. A teaspoonful of spirits of camphor may be used in the drinking water instead of carbolic-acid, and is equally effective, if not better. If, as is usually the case when roup breaks out, the buildings cannot be fumigated by burning sulphur, dust the scratching floor, roosts and nests with flowers of sulphur.

Give plenty of sunlight and attend to the diet. Corn seems to aggravate the

disease. If possible, it is better to abandon its use until the disease is subdued. If it must be fed, put the usual allowance in a brisk oven and roast it for half an hour. Wheat and oats make the best feed during a siege of roup, supplying the nourishment so essential to the bird in resisting the disease without aggravating its fever.

Now as to individual treatment: From my observation, the disease has to run its course from four to six weeks, its effect upon the fowl being mitigated by treatment. Where a bird is very sick and one has not the time to treat it, it is better to kill it and burn the carcass. If the bird has sufficient strength, the disease is curable, however. Place the fowl in a warm, sunny place, protected from drafts and dampness. Use disinfectants and give local treatment.

If the disease attacks the head, apply an ointment daily, using a feather. Be careful not to touch unaffected parts after treating those affected, as the inflamation spreads very readily. The ointment is made as follows: One tablespoonful of vaseline melted and mixed with a quarter of a teaspoonful of sulphur and two drops of cabolic-acid. if the disease is in the throat, use three drops of spirits of camphor in the vaseline, omitting the sulphur and carbolic-acid. Remove any hardened mucous visible and insert a quantity of the camphorated vaseline into the throat.

Feed milk thickened with bran, oatmeal or whole wheat, and do not liberate the bird until all inflammation and mattery discharge have disappeared.

M. R. CONOVER

The Dog's Toilet

WITH these first days of warm weather, dog owners begin to relax that watchfulness which they have kept over their pets. Perhaps a few words of advice in regard to washing the dog would not be amiss.

If you have a show dog or one of the more delicate house dogs, or still one whose coat is his pride, you should refrain from washing as much as possible, as water and strong soap injure the quality of the coat. A regular brushing with one of the various dog brushes on the market really accomplishes the same purpose as the bath. After you have vigorously brushed the dog in the direction of his coat, reaching the base of the hairs, follow with the soft leather-backed brush. There are various styles of brushes which your dealer probably keeps—different length and stiffness of bristles for the different breeds.

When it comes to that often disagreeable task of bathing the dog, a little system will take a good deal of the labor from the operation. As a good lather is the first essential, the best way to obtain it is to scrape some good quality of soap into the tub and mix it thoroughly with the water. When you put the dog into this sud-mixture it will be small difficulty to get his



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coat thoroughly lathered. See that the whole body is soaked evenly and rubbed well. When you come to rinse this off, use cool—in the case of hardy dogs, cold—water. As the season progresses, and if your dog is one of the strong, vigorous kind, you may rinse off the soap by playing the hose over him, and it will cause no harm.

Probably the most tedious and yet most important part of the bath is the drying. With all the tender, long-haired dogs great care should be taken to squeeze the water out of the coat by rubbing the hands along the body and down the legs and squeezing it out at the feet. A sponge with the water squeezed out will be in condition to absorb a great deal of the moisture. Finally resort to the towel and a brisk rubbing will dry him well enough to let him go out and run in the sun, but the exercise must be continuous until the animal is brought in the house. When the weather is quite warm, a strong dog will receive no ill effects if allowed to run about on clean grass after his bath, but one should be on the lookout to see that weather conditions are favorable, as the least chill is apt to cause permanent injury. A. W. D.

An Easily Grown Companion Flower

MOST everyone has a place in his heart, and in his garden, for the sweet pea, and while it makes an attractive bouquet by itself, there is one charming, fairy-like flower that, when used with it, enhances its beauty. While it is in taste, and generally produces a much better effect, to confine each bouquet to one kind of flower, and especially to one tone of color, this flower, the annual "Baby's Breath," known botanically as the *Gypsophila elegans alba,* may be used with almost any flower, for white, as we all know, never clashes with any color.

The flowers are so small, so numerous and so well held apart, showing their individuality, and on almost invisible stems, that they produce a misty effect, and seem to be floating over, and in among their more heavily formed companions.

While not advisable to use it with the larger flowers, such as the African marigolds, or the large asters, because the contrast in size is too great, it produces a most charming effect with sweet peas, snapdragon or flowers of similar size. One of the daintiest bouquets I ever saw, was composed of a clear pink snap-dragon, and this flower, the snap-dragon being seen through the veil of the star-like Gypsophila.

This flower is an easily grown hardy annual from the Caucasus, requiring an open, sunny situation, and frequent sowing for a succession of bloom. The flowering stems are slender, upright and repeatedly forked, producing numerous terminals, each bearing a diminutive, pure white, five petaled flower,—there is a pink form in the trade which I do not consider worth growing. I sow a row ten feet long out doors as soon as the ground is warm enough, generally

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the latter part of May, and again ten days later, and once more two weeks afterwards. In cutting them I generally pull up a whole plant of the first two sowings, and select the best part of it, but with the last sowing I cut the flowering stems well down towards the base, and often the new growth gives me some late flowers.

One of the soapworts bearing the homely name of "cow-herb" first brought into notice in 1596, is a good companion to the Baby's Breath. It is the *Saponaria Vaccaria* of the cyclopedias, a cousin of the well known Bouncing Bet, having a rather small tubular pink flower set on numerous branching stems. It blooms at the same time as the other, and like it, should be sown in succession. If one is growing a row of narcissus, tulips for cutting, or any spring blooming, upright plant, where the rows run east and west, both of these annuals may be sown close up to the bulbs on the south side, where the sun will reach them and they can have head room.

As this article has something to do with bouquets, I am reminded of seeing ladies on several occasions bring over salvia to the golf club to decorate their table for some dinner they were giving. Sometimes they used it with the rich orange African marigold, "Orange Prince," which, if well arranged, and in a proper place, makes a striking bouquet. In every instance, however, the foliage of the salvias wilted badly. This is generally the case. The proper thing to do is to strip off all the foliage, place the stems deeply into water, and then hunt around the garden for some foliage of other plant that is in good condition and placing it in water for a while, eventually use it. Foliage of the gas plant, or Fraxinella (*Dictamnus albus*) or the crown vetch *Coronilla varia*, is generally in good form late in the season when the salvia is more apt to be used. When gathering foliage from the gas plant, hunt for the younger shoots that have not bloomed. If compelled to use stems having borne flowers, cut the stubs on the upper ends back to a leaf-stem joint. Some of the ladies cut the flowers in the heat of the day and carried them over to the club in their hands, fully exposed to sun and wind and then wondered why they wilted so soon, as "they were picked only an hour ago." The flowers were partially limp before cut, on account of the heat and sun of the day, but would have recuperated during the night. The proper way is to cut them a few hours before wanted, and place them up to their necks in water, standing them in a shady situation, and away from the wind, and if they are to be carried some distance, let them be shielded from sun and wind.

W. C. EGAN.

A North Exposure

MANY people having only north windows in their living-rooms think they cannot have plants or flowers. In such a room I have had beautiful begonias and primroses in bloom through the winter months, as well as lantanas and calla lilies. Ivies and ferns also do excellently.



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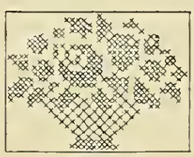
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VOLUME XIX NUMBER 6

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THE SUMMER HOME OF MR. JAMES STILLMAN, JR., POCANTICO HILLS, N. Y. Albro & Lindeberg, architects

The charge has frequently been made that Americans will not make the sacrifices to convenience necessary to obtain the picturesque exterior appearance of some of the best English homes. Mr. Stillman's home is a convincing answer—undoubtedly one of the most charmingly roofed country homes in this country. It is interesting to note the entire absence of straight edges in ridges, hips and gables

House & Garden

VOLUME XIX June, 1911 NUMBER 6

Building the Summer Home

HOW A GRADUAL CHANGE IN OUR MODE OF LIVING IS AFFECTING OUR ARCHITECTURE—LESSONS FROM THE LARGER SUMMER HOMES APPLIED TO THE SMALLER

BY AYMAR EMBURY, II

Photographs by Julian Buckly, L. H. Dreyer and others

THE social life of England presents points of considerable variance from that of America; the leisure class there is large, especially as compared with that of the United States, where for all practical intents and purposes none exists, and in England the members of wealthy or even well-to-do families who claim the city as their residence are few and far between. They go to the city for their vacation, much as we are in the habit of going to the seashore, and the so-called "season" in London is limited to the few short months in the late spring and early summer. Their real homes are in the country, often-times in places inaccessible to the city, and the commuters' life as known to us here plays there but a small part. Their country houses are distinctly homes; places where families go to live for from seven to ten months of the year, keeping when possible their town house or apartments for the "season." This life in England is by no means a tendency of modern development, but is rather the outgrowth of the old feudal times when the barons and their retainers came yearly to the court of London to pay homage, to consult regarding the laws, and to indulge for a little while in the brutal pleasures of the day, while the balance of their time was spent on their estates.



There is no reason why the smallest house should not be designed with all the care of the larger country places. This is the gate lodge of William K. Vanderbilt, Jr.'s, place at Deepdale, L. I. John Russell Pope, architect

In this country the problem has from the beginning been different, except for that portion of the population whose living was made directly from the soil. The farmers and planters of the Colonial period occupied in the social life of the nation a place which since the Civil War has been denied to them. With the industrial development has grown up the city life; people make their money in the cities and, knowing no better, live in them; but within the past decade a great change has taken place. First the very wealthy, then the intelligent members of the artisan and mechanic class, and last the well-to-do, as opposed to either of the other classes, have been moving to the country, and moving as far in the country as they could go and still get to and from their several businesses. The enormous growth of the suburbs, not alone around New York but around all cities of the East, many of the West and even a few of the South, is sufficient proof that this has been a fact. Taking my own city for an example: where the suburbs of New York fifty years ago were almost exclusively the residences of very few of the wealthier men engaged in business in New York, they are now increasing faster in population than New York itself. The neighboring counties, King's and Queen's and Suffolk in Long Island, Richmond County in the City of New York, Westchester County north of it and Bergen, Hudson, Passaic and Union counties in New Jersey, are now practically one vast suburban city. The majority of American houses not in the city are, then, suburban



A superintendent's cottage at Stowe, Pa., Aymar Embury, II., architect—another example of what can be done with the very small house



The summer home of Mr. E. S. W. Griswold, Greenwich, Conn., Ewing & Chappell, architects. There is an abundance of examples in this larger type of country home from which lessons for the smaller place may be learned



A summer home on Nassau Boulevard, L. I., Kirby, Pettit & Green, architects. A type of summer home that is based largely on the inspiration of Mt. Vernon. There is a provision for an outdoor sleeping porch on the roof of the high-column portico

houses intended for all the-year-round use, but there is a certain minority—most of them homes of the wealthy—intended to be for summer use only; but the effort is always being made, even in these, to place them not so far from the cities but that the male portion of the family can reach them easily for over Sunday and where possible once or twice during the week. While the many miles of beautiful water front around New York are either inaccessible, or already tenanted by shops and factories, the convenient and quick transportation to more distant points has made a hundred miles no very great distance to go, and this range includes all of Long Island and a good part of Connecticut and the hill country of lower New York and New Jersey. Of course the direct commuting district is within thirty or forty miles of the city and unfortunately, and perhaps necessarily, because of an increase in cottage building operations greater than that of architects fitted to handle them, the bulk of this work has been done either by carpenters without taste or training for design, or copying directly by the owners from the plans in some one of the many commercial books sold for a dollar or two—a design fitted to catch the eye of only the man untrained in art. This condition is I think in process of amelioration; the real estate promoting companies have perceived the commercial value of good design and have endeavored, according to their several degrees of taste to employ architects and procure designs for buildings more attractive than heretofore has been the case. Yet it still remains a fact that it is the few and not the many who are building beautiful houses, whereas, before our countryside can



A summer home at Lawrence Park, Bronxville, N. Y., William A. Bates, architect—a splendid adaptation to modern needs of the Connecticut farmhouse type

ever take on the exquisite charm of the English landscape, all or a vast majority of the houses must be built with some taste.

I should like to present with this article a number of country houses ranging in cost from four to seven thousand dollars, to illustrate the fact that these can be quite as good in their way as the more expensive houses, but unfortunately such a group would be almost impossible to find, since the average man building a house of this size prefers to go to a carpenter and let him prepare the plans and build his house, than to go to an architect and have him design one. Speaking plainly, the envious criticism directed so constantly by the public and the popular magazines of this country at the lack of taste, lack of education and vulgar ostentation of the wealthy, is misdirected if the comparative taste displayed by the wealthy and the merely well-to-do in their homes can be taken as a criterion. While it is true that many of our largest and most expensive houses cannot be described as our best and most beautiful

houses, it is still more true that only an almost unrecognizable minority of the smaller houses can be so described.

I am therefore compelled to present for your consideration as illustrating the possibilities of design in country houses, buildings—which in most cases, are put, on the score of expense, outside the range of possibilities for me, and perhaps for most of you; but they will illustrate the trend of the current American thought on the subject, and the group does include three houses, the sizes of which are small and the cost hardly outside the range of the mechanic.



A summer home in Wisconsin, Myron, Hunt & Elmer Grey, architects. The simplest materials have been used throughout the interior as well as on the exterior

Let us take up these three houses, the first of which is Hawthorne Lodge, the summer home of Miss Maria Grey at Fox Point, Wisconsin, which is as inexpensive as it is simple; the materials are only those common to all classes of cheap houses, and less expensive than many. There is not a cent wasted in elaborate cornices, brackets or details of any sort—much as was the case with the delightful farmhouses of Colonial times, whose simplicity displayed the elegance of quiet good taste. The shape of the house as a whole leaves nothing to be desired, and it is frankly upon its shape, or mass, as we call it technically, that the



A country home at Pleasantville, N. Y., William A. Bates, architect. There is an interesting and unusual use of stonework in the circular columns supporting the wide overhang

design depends. A simple straight roof line is broken only by a single chimney, and the piazza at one end is balanced by a low extension at the other. There remains nothing more to be said about the house; it is an ideal country home for people of refinement whether they be wealthy or poor.

The second house was a gate lodge designed for the country estate of one of our families most prominent in the business and social life of the nation. Here was a case of a man who, because of the possibilities for travel and education, appreciated that good design was as much a necessity in small work as in large, and he accordingly built his gate house with the same care he gave to his dwelling. No better proof is needed that art can be obtained as well in small work as in large, than the fact that his gate lodge is much superior in design to his house itself. It is designed along familiar English lines, in half-timber and stucco with a tile roof, and while the building was not a cheap one, its



The home of Mr. Frederick Swift, Pelham Manor, N. Y., Ewing & Chappell, architects—an informal adaptation of the Colonial to an irregular site. The porch extension secures a cool breeze from any direction that the wind may blow



The summer home of Mr. George Davidson at Madison, N. J., Albro & Lindeberg, architects. An interesting variety in plan and also better lighting for the important rooms of the first floor have been obtained by swinging off at an angle the end wings

price by no means put it out of the range of everyone. If Mr. Jones and Mr. Smith could have this house as well as Mr. Vanderbilt, I think that criticism of Mr. Vanderbilt's taste is ill taken when we consider the house that Mr. Jones or Mr. Smith lives in, stained in gaudy colors, replete with unmeaning and ridiculous ornament, and about as expressive of Mr. Jones' or Mr. Smith's own quiet temperament as would be a business suit of purple and scarlet.

The third example of the smaller houses illustrated is a superintendent's house for Mr. Stanley G. Flagg at Stowe, Pennsylvania. Mr. Flagg is a Philadelphian with a big factory at Stowe; desiring to erect a house for his superintendent, instead of simply handing out the order to some carpenter he took a little thought as to convenience of arrangement and excellence of exterior. It cost no more than the cottages owned by his workmen which surround it, but there is a difference in their quality due not to the comparative wealth of their owners, but to the fact that Mr. Flagg wanted and knew how to get something that was not commonplace.



The summer home of Mrs. John C. Clark, Lawrence Park, Bronxville, N. Y., William A. Bates, architect. An avoidance of all symmetry in the disposition of the openings is in harmony with the rough character of the woodland site

Most of the other houses illustrated in the article are the summer homes of wealthy city residents; play-houses if you like, built for temporary housing, and yet evidently for temporary housing of people who regarded beauty as an essential to their dwellings as much as to their clothes.



A sharp contrast is this summer home of Dr. Hollister at Easthampton, L. I., Albro & Lindeberg, architects, where the long horizontal lines of the building are accented in every way to harmonize with the lines of beach and horizon

The tendency of life to-day is to spend more and more of it in the country, following the English idea spoken of in the beginning of this article, but our country places are as a rule so situated that they are possible of access to the city, so we can attend to our daily business whether we live in the city apartment or in the country house.

The houses illustrated show the wide range of types used in America to-day, the basic motive of some of them being the American Colonial, others are of the English domestic type, and one is a sort of mixture of Italian and Colonial; yet each seems particularly suitable to its situation, and I think that no incongruity would be noticeable were they placed side by side. Whether this would be because we have grown accustomed to seeing every sort of house on a single block, the exotic beside the native, and the well designed beside the house of no design at all, or whether it is because the overwhelming force of modern design compels the introduction of a certain characteristic modern note, I am hardly qualified to say, although I believe the latter to be the case. They are all essentially homelike in quality and one can admire them alike without reserve.



The country home of Mr. J. A. Lafore at Cynwyd, Pa., Baker & Dallett, architects. The use of stone and the more permanent building materials is no longer a dependable indication that a building is for all-year-round use

Two of the Colonial houses are the work of Messrs. Ewing and Chappell, well suited for the Connecticut hillside on which they are placed. Another of the Colonial group, a house at Nassau Boulevard, Long Island, designed by Messrs. Kirby, Petit & Green, resembles the others in its coloring and the fact that it is surrounded with trees. These white and green houses, beautiful as they are, are much enhanced in appearance by trees higher than the houses themselves, and these trees should be of the deciduous type—lindens, elms, maples and the like.

On the other hand a house of English derivation such as the Davidson house, Albro & Lindeberg, architects, seems most fitly placed with the trees so fortunately growing around it. Some kinship evidently exists between the stucco walls and soft roof lines of this house and the quiet somber forms and dull green of the cedars. Trees do unquestionably improve any house in appearance, and delightful as the house at Cynwyd is, it will be still more attractive when the small trees around it have grown to large size. The combination of stone and half-timber of this house is particularly well done. Around Philadelphia they certainly know how to do stonework better than we do in New York, and this is an example which should at once recur to any prospective home-builder whose fancy pictures a stone house. Contrast this with any of the many houses built by a cheap real estate company, in which the so-called rubble, or fieldstone walls, each stone of which is round and seems to be rolling out of its place, so that one questions very strongly the stability of a wall built of such materials. Of course the splendid cement mortar which has nowadays taken the place of lime, makes

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The dogtooth violet (Erythronium Americanum) may be found in the woods from the latter part of April to the middle of May

A walking trip on the mountainside will probably make you acquainted with the purple azalia, which is in reality pink and white

And who can come upon a colony of the showy orchid (*Orchis spectabilis*) with their slender pink-purple flowers without the real thrill of a discoverer?

A Botanist's Vacation

SOMETHING OF THE FASCINATION AND CONTINUED VARIETY OF INTEREST THAT IS TO BE FOUND IN RAMBLES THROUGH THE WOODS AND MEADOWS WITH A CAMERA AND A TROWEL

BY FLORA LEWIS MARBLE

Photographs by the Author

IT lasted from the time when the first dogtooth violet bloomed in the dell, until the last stalk of beech drops turned brown and dry. All that time I was on familiar terms with the flowers. It is impossible, when you are down on your knees on the soft, dry beech leaves before a nodding blossom, perfect in every part, to call it to its face *"Erythronium Americanum";* nor in God's open air, does it sound well to say to the modest little parasitic beech drop growing later under the same trees,— "You are *Epiphegus Virginiana,* an *Orobanchaceæ.*" So I dropped all formality with the flowers then, and shall now in thinking of that summer, and I believe I can prove to you that a botanist can have the most enjoyable of vacations.

There are several essentials to a botanist's vacation. You should be a good walker. The places where grow the flowers you want most are often far from even a bridle-path, so you must climb arduously, oftentimes over rough ground.



Fortunate indeed is he who finds in his July rambles the rare, showy, pink lady's-slipper rising gracefully above the green leaves in the most secluded and deeply shaded corners of the pine woods

If you are a woman you must have a companion. A dog is the best possible chum. He will put up with any eccentricity of yours and think it is part of the game; what is best, he won't go home and tell of it.

You must have a notebook with a pencil tied to it, and it in turn tied to your belt. If you paint, water colors are convenient, but in this day and age of the world you must have a camera, and know how to use it.

A botanist's camera has to go through many exploits that are unknown to the experience of an ordinary machine, for the botanical value of a photograph is doubled if the



And there is always the added zest given a walk in the wild by the knowledge that one may bring home and colonize some of the native flowers—as this pitcher plant that now dwells in the home water-garden

plant is photographed as it grows, before it is even touched by your hand. This is so small a task as sometimes to assume tremendous difficulties. The dogtooth violet is an example. Here a layer of beech leaves made a fairly dry carpet over the moist earth. Down on my knees I went, adjusted the camera on two flat stones, leveled it with a piece of bark, focused on the plant I wanted, literally standing on my head the while, let the dark, wavy bark of an old beech tree form the natural background, and waited on my knees until the air was perfectly still—for the least breath of wind will sway the slender flower stalk—then, when even Nature was ready, I pressed the bulb, and the picture was taken.

After the plate is carefully packed away the notebook comes into use. Each page is ruled down its length several times, making columns in which records of the flowers photographed can be kept. My columns for data were as follows for a left-hand page: Date; Locality; Botanical Name; Common Name. On the page opposite, so that one could read right across, I made columns for the following: Plate Used; Lens Stop; Length of Exposure; Botanical Remarks (such as "lily family," "perennial," etc.

When this was done sketches of the parts of the flower were made, and it was carefully analyzed. If there is no time for that, and a microscope of size is needed, put a few of the flowers in a tin botany case to take home.

Now the pleasantest part of the work begins. Sit down quietly close to the blossom and get acquainted. Waiting alone in the quiet woods, where even the approach of an insect to the honey cup of a dogtooth violet is a noisy happening; one awakes to "a world full of wonder." This "wonderful secret of peace that abides in Nature's breast" takes hold of you, and you learn a lesson then and there that can never be gotten from books, or towns, or people; it is better than botany. It is better than flowers even, for it is a glimpse into God's world of reality.

May is always a busy month in the woods. I had all the common flowers to photograph. A walking trip up the Armenia mountain gave a day spent under the flowering branches of the purple azalea, which is not purple at all, but pink and white. It grows along the edge of the forest. Following an old wood road down the side of the mountain, we came to a shady dell hung thick with the dainty baneberry blossoms. Right in the path grew a colony of showy orchids in full bloom. Every day when a botanist finds an orchid is a red letter day, even if it is an old friend and not a new find. I put a coat behind two sprays of the blossoms as they grew, took their photograph, admired their slender pink-purple flowers, and went on my way with heart



Photographing one of the lilies, for example, at close range, will show the wonderful detail of the pollen on its perianth



Or you may secure with your camera an enduring record and reminder of the delicate beauty of the catalpa blossom

beating a little faster.

The next pulse-moving experience occurred in June. On a bright day, the seventh of the month, I went hunting pitcher plants in a peat bog on the mountainside. The water is clear and blue in the center of the pond. They say there is good fishing there, but there are no boats. Planks are laid across the roots of trees so one can get to the water's edge. Once there, I saw to the right of the plank on which I was standing, a large pitcher plant in full bloom, and beyond pitcher plants stretching away and away. Now I wanted to take a pitcher plant home because I had a water garden in which to let it grow while I watched its maneuvers with insects, so, armed with a trowel, I walked out on the oozy ground. It swayed and I was up to my knees in mire at every step. When it came to digging I could not drown, for I was in the bog up to my knees and elbows and balanced perfectly. Even Teddy, the dog, laughed at me from the plank from which he was too wise to venture, but I brought the pitcher plant home and it is growing lustily now in the water garden. I have raised seed enough from it to plant an acre.



Three plants of the yellow lady's-slipper were brought in from the mountainside many years ago and they have taken up their new abode in a corner of the house with every indication of contentment

Just here let me say that a botanist should have a garden of his own to put things in from time to time for further acquaintance. Many haughty remarks are made about what are called "Botanist's Gardens" because they contain little patches of this and that with no general effects that can properly be called gardening. This need not be so, for what is called "wild gardening" can be botanically valuable and artistically effective. My garden is a notebook in which I read every summer the life history of succeeding generations coming from wild stock.



In the last furrow of a newly plowed boggy field was found and rescued a fine root of the purple-fringed orchid

The latter part of this same month gave me another addition to the water garden. Here let me say that I do not believe in digging wild plants, because soon the beauty of our woods would be destroyed, but I always believe in saving wild plants. In this way several treasures have come to me from the plough of a farmer turning over a new field, or the axe of a woodman clearing a woodlot. It was in the last furrow of a newly ploughed field that I discovered a fine root of purple-fringed orchid. Why they wanted to plough the field I never could guess. It was too boggy to plant successfully with much besides orchids and cat-tails. This new specimen found its way to the water garden with plenty of its own earth to fill a pot, and there it grew, among the water-lilies.

The other orchids that gave lustre to the season were the yellow lady's-slipper that grows in the garden in a thrifty patch, three plants having been transplanted many years ago from the mountainside and colonized; the showy pink-purple lady's-slipper that

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And in the garden itself there are such interesting things as the hollyhock's pollen-covered pistil and crinkled petals

Modern Warfare on Garden Pests

DESCRIPTION AND CHARACTERISTICS OF THE ENEMY IN DETAIL—WHEN AND WHERE TO EXPECT ATTACK—TACTICS AND AMMUNITION FOR DEFENSE

BY F. F. ROCKWELL.

Photographs by Profs. Lowe and Britton and others



A plum twig infested with San José scale

THERE is one section of modern warfare in which no peace conferences are to be held; in which there are no advocates of disarmament; in which the fighting must be without quarters and to the death—the war on plant enemies.

And it must be a guerilla warfare—each planter fighting his own skirmishes by himself. It may be that our national and state governments will be able some day to take suitable and adequate steps toward the extermination of the several insects and disease pests that annually cause the loss of millions of dollars worth of crops. But until that happy day, each gardener must fight for himself, and in order to be successful, he must take advantage of every new engine of destruction or means of protection, of every more effective ammunition that invention and science places at his disposal, and fight it out with vigor and persistency.

Nor is this all. In order to utilize these agencies in the most effectual ways, he must make himself master of the strategies of the situation; he must analyze the conditions and comprehend the individual factors in the campaign he will have to carry out. Only by so doing will he be able to apply the proper method of fighting to the particular battle to be fought.

I use the term "method of fighting" rather than the more usual one, "remedies," because both by experience and study I am convinced that so long as the commercial fields of horticulture remain in the present absolutely unorganized condition, and so long as the gardener, big or little, who is neglectful, and thus becomes rather a stockman than a gardener, breeding all kinds of plant pests—just so long as this is permitted we can achieve no remedy worth the name. When speaking of a remedy in this connection, we very frequently are putting the cart before the horse, and refer to some means of prevention. Prevention is not only the best, but often the only, cure.

The whole problem of plant enemies and methods of combatting them is at present in a somewhat complicated state. It has not received the attention from scientific investigators which other branches of horticulture have. Many experiments and discoveries have been made, but we have reached not nearly so definite a line of action as we have, for instance, in enriching the soil.

Before taking up the individual insects and diseases, it will repay the gardener to try to fix in his mind the several classes of these, in order that he may make himself familiar with a few general principles, rather than get lost in a tangle of detail.

To make the matter plain, then, the following analysis and list will enable the reader to get a general comprehension of the whole matter.



A powder gun that distributes a fine cloud of the insecticide

Plant enemies we have to fight may be put under four heads, as follows:—

Insects { Eating and chewing / Sucking

Diseases { Fungous or germ / Constitutional

From the above it is seen that plant enemies are of two kinds—insects and diseases. Of the former there are two sorts; (1) those which chew or eat the leaves, stems or fruit, and are usually hard-shelled; and (2) those which suck the plant juices and are usually soft-bodied. It will at once be seen that the first class can best be reached by internal poisons, and the latter by external ones, as it has never been found possible to get effective poisons into the sap or juices of the plant. Of the diseases also there are two sorts, fungous or germ diseases, resulting directly or indirectly from the attack of parasitical fungus or germ; and constitutional diseases, which attack the organism of the plant as a whole. Of these latter very little is known. Sometimes they may be caused by imperfect nutrition, or again by an oversupply; often there is no apparent cause. Failing to discover a fungous or bacterial origin, and finding the disease attacking the whole plant, experts place the ailment in this general class and seek different remedies.



A twig bearing the egg mass of the tent-caterpillar

It thus becomes evident that the remedy to be used must depend upon the enemy to be fought. We can therefore reduce the matter to a simple classification, as follows:—

PLANT ENEMIES		CLASS
Insects	Eating	A
	Sucking	B
Diseases	Parasitical	C
	Constitutional	D

REMEDIES		NUMBER
Mechanical	Covered Boxes	1
	Collars	2
	Cards	3
Destructive	Hand-picking	4
	Kerosene emulsion	5
	Whale-oil soap	6
	Miscible oils	7
	Tobacco dust	8
	Carbolic acid emulsion	9
	Corrosive sublimate	10
	Bordeaux mixture	11
Poisonous	Paris green	12
	Arsenate of lead	13
	Hellebore	14

With this knowledge before us, the problems of the war on plant enemies are greatly reduced. When a strange bug appears in the garden, or something seems to be going wrong with the cucumber patch, first try to ascertain correctly what the trouble is; then in what class it belongs. Knowing this, we will know how to proceed against it, using just the weapons which experience and experiment have proven most effective.

The accompanying table includes all of the garden pests ordinarily to be encountered. In the more extended comment on each which follows will be found a description sufficiently detailed to assure the identification of any intruder.

Let the beginner not be disheartened by such a formidable looking list of enemies. In actual work many of these pests will not put in an appearance at all. While some fourteen remedies have been mentioned, as a rule most of these insects and diseases can be successfully fought off with the assistance of the following half-dozen, if used in time:

Covered boxes, hand-picking, kerosene emulsion, tobacco dust, Bordeaux mixture, arsenate of lead.

Supplies for all these should be kept on hand at all times, ready to be mixed and applied at a moment's notice, for upon quick action, as much as upon anything else, will the result of the battle depend.

To enable the gardener to recognize on sight his various foes, the following more detailed information is given:

Garden Pests and Remedies

The letters and numbers given in the table refer to detail descriptions in the article.

ENEMY.	ATTACKING.	CLASS.	REMEDY.
Aphis (Plant louse)	Plants inside and occasionally outdoors. Especially the cabbage group	B	5, 6, 8
Asparagus-beetle	Asparagus foliage	A	13, 12
Aster-beetle	Asters and other flowers	A	4, 13, 12
Black-rot	Cabbage, cauliflower, etc	C	10
Borer	Squash and pumpkin	B	4
Cabbage-worm	Cabbage group	A	12, 5, 4
Club-root	Cabbage group	C	Rotation
Cucumber-beetle	Cucumbers and vines	A	1, 8, 11, 13
Cucumber-wilt	Cucumbers and melons	C	4
Cucumber-blight or mildew	Cucumbers, melons	C	11
Cutworm	Seedlings and newly set plants	A	2, 4, 12, 13
Flea-beetle	Potato, young cabbage, radish, turnip	A	5, 11
Potato-beetle	Potato, egg-plant	A	4, 12, 13
Potato-blight	Potato	C-D	11
Potato-scab	Potato	C	10
Root-maggot	Cabbage group, turnip, onions	A	3, 4, 9
Rose-bug	Roses, grapes, etc	A	4, 13
Squash-bug	Squash, pumpkin, vines	B	1, 4, 5, 8
Tomato-worm	Tomato vines	A	4
White-fly	Inside plants, vines outside	B	5, 6
White-grub (Muckworm)	Lawns, strawberries, plants	A	4

APHIS. This is the small, soft, green plant-louse, sometimes found on the under side of cabbages and other succulent-leaved plants. They seldom attack healthy growing plants in the field, but if plants set out are even slightly infested, and dry weather follows, they are apt to multiply very rapidly. Kerosene emulsion, whale-oil soap and tobacco dust, are all used for them. In applying, be sure to reach the under sides of the leaves, which must be done before the leaves are so badly infested as to curl up and thus afford protection to the insects. Remember that they are all contact poisons, and must touch the insects in order to be effective. In addition to the remedies mentioned there are several trade-marked preparations that are good.

ASPARAGUS-BEETLE. This pest, which usually does not appear until after the asparagus season is over, sometimes strips the foliage off clean and seriously injures the crop for the succeeding year. In cleanly cultivated patches it is not likely to give much trouble. Thorough spraying with arsenate of lead will take care of it.

BLACK-ROT. Sometimes cabbage and cauliflower, when well along, are attacked by a disease which causes the leaves to fall off, and thus prevents heading. In clean, limed soil, with the proper attention given to rotation, it is not likely to appear. In cases where the disease has been encountered previously, soak the seed for fifteen minutes in a pint of water in which a corrosive sublimate tablet (sold at druggists) has been dissolved.

BORER (Squash). The borer which attacks squash and pumpkin vines, is a flattish, white grub, which penetrates the main stem near the ground and seems to sap the strength of the plant, even when the vines have attained a length of ten or more feet. Be on the lookout for this hidden enemy. When the leaves wilt down suspiciously during the noontime heat of the sun, examine the base of the stalk; or pull a vine up, and slit the stem in two. Coal ashes, mixed with manure in the hill, is claimed to be a preventive. Another is to plant some early squash between the hills prepared for the winter squash, and not plant the latter until as late as possible. The vines of early squash, which serve as a trap, are pulled and burned. Last season, in one of my fields, almost half the vines were attacked after many of the squashes were large enough to eat. With a little practice, I was able to locate the borer's exact position, indicated by a spot in the stalk where the flesh was soft, and of a slightly different color. With a thin sharp knife-blade, I carefully slit the vines lengthways at this spot, and killed the undesirable intruder. The vines, in almost every instance, recovered and matured their crops. Another method of overcoming this destructive work of the borer is to heap moist earth over several of the leaf joints on each vine, when they are sufficiently long, thus inducing a secondary root system.

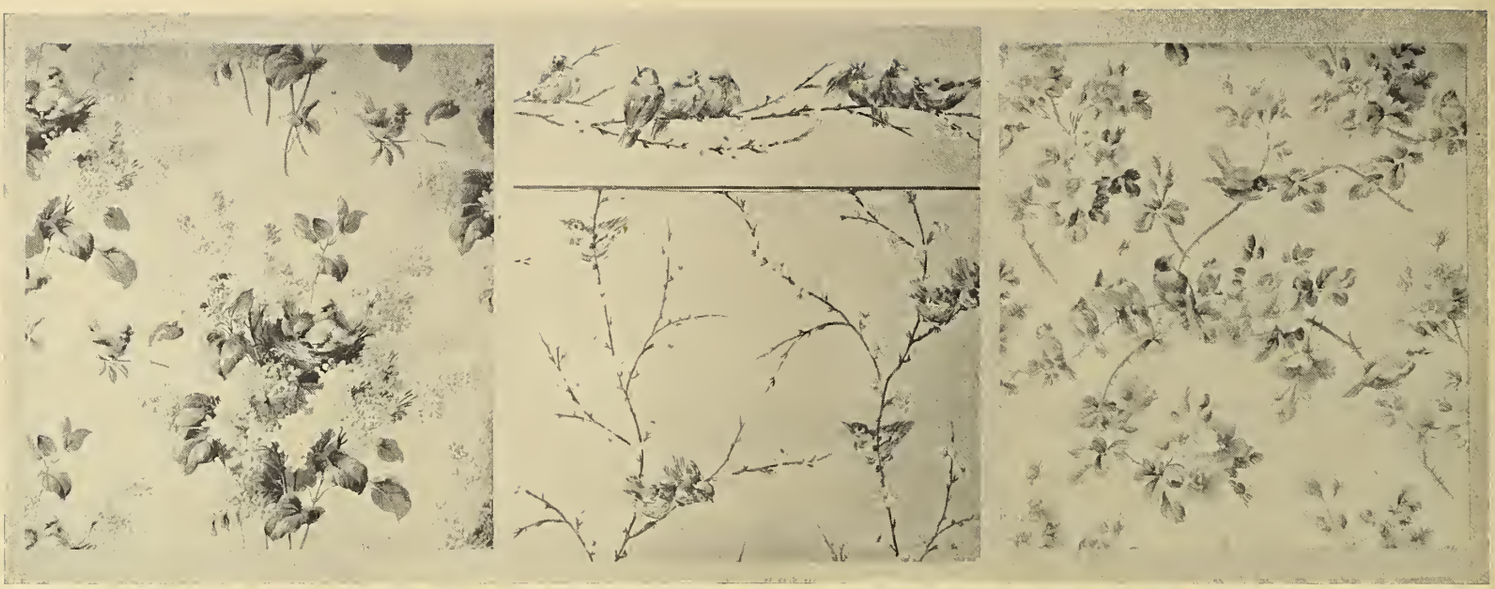


A compressed-air sprayer is a great convenience for applying the liquid insecticides; for the orchard an extension rod may be used to reach the higher branches

CABBAGE-WORM. This common green cabbage-worm is frequently hatched out in sufficient numbers to make it a very disagreeable pest. It is the caterpillar of the small white or yellow garden butterfly of early spring, and where a garden is isolated, or neighbors can be induced to act in unison, catching the butterfly as soon as seen, with sugar, gin and water bait, or nets, will repay the trouble. When the worms appear, pick off all that are visible and spray the plants with kerosene emulsion if the heads have not begun to form. If the leaves have begun to close up, use hellebore instead.

CLUB-ROOT. In ground that is planted several seasons in succession to cabbage or allied crops, such as cauliflower or turnips, club-root is practically certain to appear. It is a

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It is possible now to obtain not only wall papers with suitable friezes in the blue bird motif, but also cretonnes for the summer hangings, bedcovers, etc., of similar patterns

A Blue Bird Bedroom

BY LYDIA LEBARON WALKER

THE latest impulse in the decorative treatment of rooms comes from what we may call the idea of character. This is something of an advance beyond former concepts. For example, we have had period rooms, color rooms and rooms which have been developed from the point of view of their particular functions, such as dining-rooms and nurseries. But to consider a room somewhat as a painter might regard his canvas, as something to afford a vehicle for the expression of definite and mature ideas, in a word to give a room a newer and intenser touch of naturalness, individuality and even personality—this is the promise of the recent development of the character room.

It is not easy to convey the precise conception of such a room in a single sentence or paragraph; but the outlines which follow, together with the illustrations, will probably suffice to make the meaning clear.

The best way to explain the genesis of a new room of the nature indicated, will be to take up a concrete example from which it will be seen how it is possible for rooms to reflect the contemporary thought of the people. For some months the younger and older generations alike have been fascinated by the picturesque aspects of Maeterlinck's "Blue Bird," while they have been touched by the deeper meaning of the sweet allegory. Now commerce is becoming intimate. It seeks to divine prevailing sentiment, and to appeal to it by reflecting it. And so we have various blue bird creations such as blue bird cretonnes, blue bird draperies, blue bird vases, blue bird bureau fittings and other accessories, and complete blue bird furnishings, including wall papers. These have followed naturally upon blue bird jewelry, millinery, stationery and similar fashionable innovations. Let us hope that this interesting flock of blue birds may succeed in distributing a very large measure of happiness everywhere. If it should chance that the reader is not familiar with the thought of the drama we may explain that its symbolism calls the bird the "Blue Bird for Happiness."



The wall paper used here is a satin stripe in cerulean blue and it is treated with what is known as the "crown" effect—a silhouetted pattern from the paper on page 428

The specific purpose of these paragraphs is to present some essential characteristics of a blue bird room. At the

outset two observations may be made: first, this is the most recent of all rooms to be developed, and consequently it possesses the element of novelty so dear to us Americans; and second, it is one of the most felicitous of all ideas for summer decoration, and should enthusiastically be appropriated for the treatment of rooms in summer residences, though not necessarily confined thereto. In this connection we may also add that blue is the coldest of all colors, an additional argument for summer use. Psychologically indoors and outdoors become merged and linked together, so to speak, by this bird motif, birds on the swaying branches and birds in the quiet room, birds when you go out and birds when you come in. The transition is not great, whether one sleeps on the veranda or sleeps in the room. There is a certain unity about the environment in either case.

Let us leave the out-of-door birds behind as they are very well able to take care of themselves, and enter the blue bird room, which is more dependent upon our helpful ministrations. Some one has said that comparisons are odious; whether that is true or not, it is certain that they are elusive. To what shall we compare the walls of a blue bird room? Here let us remark that there are different blue bird rooms, because there are different blue bird papers and furnishings. This allows for further individuality and shades of expression even in a blue bird room. The walls of one room for example will suggest the effect of a blossoming garden in the early morning, or at twilight, or on a dull and misty day when the body of the paper suggests an atmospheric haze against which the slender branches stand in relief, bearing their fluttering blue birds which are the chief motif of the design. A very charming frieze in the same general tones carries the slender stems about the room. And on these twigs are perched cosy groups of blue birds as if nesting time were approaching, and one might almost fancy he could hear them billing and cooing. Lest the above outlines might convey an impression of somberness, with the birds against the haze, it should be explained that the yellow blossoms impart the necessary touch of brightness and warmth.



One of the severely conventionalized papers that would be at its best only where it does not appear in large masses



Nor is there any lack of opportunity to carry out in the bureau fittings —hatpin holder, pin-tray, etc.—the blue bird motif in color and form

It will be noted that the paper above described is not unduly conventional. It has something of the irregularity and freedom of the garden. One might fancy he could separate the branches and walk through. Another paper, however, is more conventional. It is what is known as a stencil paper. It has stereotyped, regularly recurring rows of leaves, flowers and blue birds. The birds are perched in pairs one on each side of a conventional leaf. The horizontal lines of birds are a foot apart. The birds and flowers are in a decided blue, while the leaves are in a dark neutral green. The strength and comparative severity of this design might render it oppressive if presented in too great a mass, though it is found effective when employed with appropriate restrictions. When used above a wainscoting the effect is rather rich. The lower wall should be white. In a small room in an apartment, the



White enameled furniture, of wood, willow or wicker, is best for furnishing the blue bird room; for the floor covering a blue-and-white rag rug with a blue bird end border is available

paper gives an impression of openness. It is not out of place in dens or nurseries.

Speaking of the upper walls of rooms, there is one interesting blue bird paper which comes only as a border. It is as if the wall above the molding were open and one looked through it and saw the birds against the sky. It would seem as if one could draw a deeper breath with this effect of birds and atmosphere above one's head. The border is extremely simple, we have practically described it already—just blue birds poised in different attitudes upon a neutral band which forms a sort of skyline, and behind them nothing but immensity.

A moment ago we were in a garden; let us now enter an orchard. That is the true home of birds. Fruit and feathers seem to have an affinity. Blossoms and wings go together. The songs seem to make the fruit taste better. The paper we are now contemplating has something of exquisite delicacy of cherry blossoms and humming birds. One might hesitate to open a door for fear the blossoms might detach themselves and the birds fly away. In describing such a paper one is disposed to search his thesaurus for all the synonyms of daintiness and delicacy. It has the shimmer of a Corot painting. As generalities, however, can hardly be very enlightening to the reader, it will be necessary to come down to earth and endeavor in set terms to give more definite specifications. The background is a creamy white. In deciding upon this ground of the paper the artist probably had in mind nothing more nor less than daylight. The sun may be assumed to be in front rather than behind the decorative objects, as everything is illuminated and, so to speak, bathed in a wash of light. Substantial branches in pallid shades of brown are gnarled and twisted. They are aglow with cherries and cherry blossoms, while here and there are to be seen the birds either perched or hovering. A way of treating this paper to add to the naturalness and beauty of the effect is to silhouette, or cut out along certain lines of the design. This gives what is known as the "crown effect" and appears in the illustration. This treatment is followed when the paper is used only as a frieze without being broken by a molding. If the latter is used it must be placed along the ceiling angle and must be white or cream. Below the serrated edges of the crown extends an exquisite satin-striped paper in cerulean blue. This blue gives an absolutely open effect. It is like an Italian sky. And what adds the finishing touch of artistic perfection is that the birds, branches, fruit and flowers are as it were, swaying over one's head. Blossoms and leaves trail down the corners of the room and about the doors, giving the desired panel effect. These notes relate particularly to the paper as photographed. This treatment is regarded as nothing short of ideal. This blue bird paper is produced with such variations of color as afford some opportunity for selection. It may also cover the entire side walls instead of being silhouetted as described. The bower effect is intensified and the cost materially lessened by the latter plan.



While a brass bedstead may be used in the blue bird room, a white enameled one will be better



One of the simplest and most effective examples of the blue bird friezes



Brown gnarled limbs, aglow with cherry blossoms, and the blue birds, on a background of creamy white

If the attempt were made to describe all of the interesting bird papers that are now available, it would very much exceed the limits of the present article. There are bird papers in which are representations of peacocks and birds of paradise, so diminished however that they cease to be salient features of the design. In many of the papers the birds are of sufficient size if not indeed exaggerated. Whatever the kind of bird the tone may be blue. It may be well to note at this point that a secondary bird motif was imparted by chanticler so that the bird type is not necessarily or exclusively the blue bird. Indeed, in the play of that name the real blue bird was not employed, owing to its diminutive size. A blue pigeon was substituted because it could be seen all over the house. In blue bird jewelry a blue swallow has

(*Continued on page* 463)

The Seventeen-Year Locust Appears

AN INTERESTING NATURAL PHENOMENON THAT HAS AROUSED MANY GROUNDLESS FEARS—THE CICADA THAT SPENDS SEVENTEEN YEARS IN PREPARATION FOR SIX WEEKS ABOVE GROUND

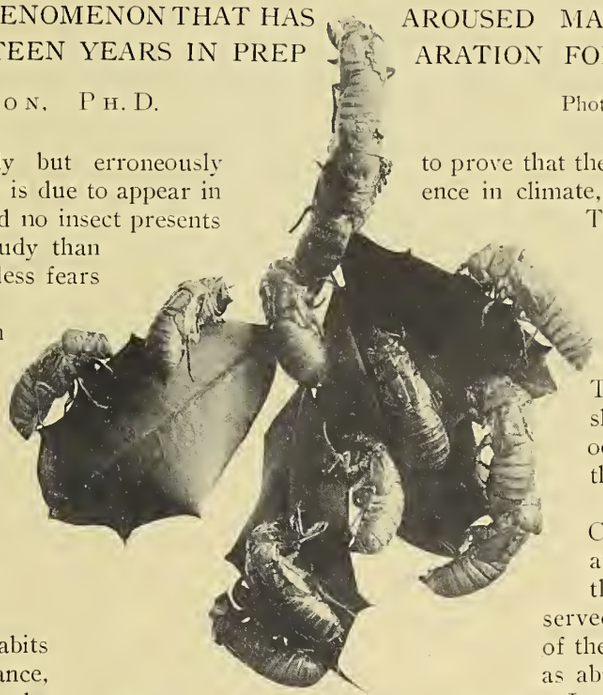
BY D. EVERETT LYON, PH.D.

Photographs by Robert A. Kemp

THE Periodical Cicada, popularly but erroneously called the seventeen-year Locust is due to appear in great numbers during this summer, and no insect presents a more interesting phenomena for study than this, nor is the subject of more groundless fears on the part of our rural population.

This insect, peculiar to the American continent, is remarkable in its adolescent period, spending seventeen years in obscurity in a subterranean state, during all of which time its presence is unsuspected by the majority of people. It makes its presence known only when in unlimited numbers it marches forth, all members of the species attaining their maturity in almost the same moment.

Many people unacquainted with its habits are needlessly alarmed at its appearance, and have visions of vast devastation to be wrought by its activities, when, in fact, the damage done is infinitesimal.



Even the foliage will be covered this month with the cast-off shells

The period of its aerial existence is very brief, yet during this time it leaves unmistakable evidences of its activity, as seen in the many eggs deposited in slits made in twigs and branches of surrounding shrubbery, a work accomplished accompanied by an incessant humming on the part of the males.

The damage done is, however, very slight, and a little pruning of the branches containing the eggs will forestall any ill effects that might occur.

More or less of these insects appear every year, due to the fact that there are several broods scattered over various sections of the United States, but careful observation shows that the recurrence of the main group is regular, every seventeen years in the northern states and every thirteen years in the southern states.

This variation in time has opened the question as to whether the thirteen-year locust of the southern states is a separate variety, or whether the difference in climate hastens its growth, but since the two varieties overlap in the same county along the boundary of the northern and southern states, it would seem to prove that the variation is not due so much to a difference in climate, as to a decided difference in species.

The reason for the seventeen-year larval life of the Cicada cannot be satisfactorilly explained, though it seems like a provision of Nature to protect it from its many enemies in the form of parasites and insectivorous birds. The danger from birds, however, is very slight as their appearance is of such rare occurrence that birds do not come to know them as a steady article of diet.

While many reports concerning the Cicada are untrustworthy, yet we have authentic records that as far back as 1634 the swarm at Plymouth, Mass., was observed and noted by the Puritans, and a record of the recent swarm there in 1906 shows them as abundant at ever.

In 1666 The Royal Society of London published the following concerning them:

"A great observer who hath lived long in New England, did, upon occasion, relate to a friend of his in London where he lately was, that some few years since, there was such a swarm of a certain kind of insects in the English Colony that for the space of 200 miles, they poyson'd and destroyed all the trees of the country, there being found innumerable holes in the ground, out of which those insects broke forth in the form of maggots, which turned into flyes, that had a kind of tail or sting, which they stuck into the tree, and thereby envenomed, and killed it."

We can see by the above that these insects were at least in the country when the early settlers arrived, and for centuries prior to this.

Another writer has said:

"Still more remotely one can picture its song, causing wonderment to the savage Indians who attributed to it baleful influences, and yet, less dainty than their white followers, used the soft, newly-emerged Cicadas as food; or further back in time, when it had only wild animals as auditors. With these long-time measures, our brief periods of days, weeks, months and



A flashlight photograph taken shortly after the emerging of the Cicada. The newly-born creamy-white insects are seen beside their discarded skins

years, seem trivial enough."

Dr. G. B. Smith, referring to their song, writes:

"The music or song produced by the myriads of these insects is wonderful, to some people it becomes monotonous, to me it is otherwise, and when I heard the last note on June 25 the melancholy reflection occurred—'Shall I live to hear it again?'"



Particularly in damp localities will the Cicadas erect these curious mounds in which they await the hour of emergence

Many broods that formerly occupied vast areas have almost entirely disappeared due to the clearing up of forests that constituted their breeding grounds; nevertheless they have succeeded in so distributing themselves that they are as abundant as ever and due to appear this summer in unlimited numbers.

No insect presents in its life history so much that is anomalous and interesting as the Cicada, and the nature student will find it a wide field for interesting research. There is no doubt but that the many broods scattered all over the United States were comprehended in a single brood in the past ages, and with the geographic, climatic and topographic changes that have occurred, they have become widely scattered, forming distinct broods that have been recorded from time to time.

It would be uninteresting to the reader to give a description of the different broods scattered over the country, as the phenomena is practically the same with all broods, so that, leaving their classification to those inclined, we will rather give a description of the life and habits of these insects that are sure to command our attention the present summer.

These insects, generally speaking, emerge from the ground during the last week in May, though there may be a slight variation in this, due to local conditions, but this is approximately the time, and usually by the first week in July they have disappeared almost entirely.

The males disappear several days before the females, and we frequently see myriads of females ovipositing their eggs after the song of the males has been hushed for several days.

A remarkable thing about the Cicadas is that though they emerge in countless numbers and mature at almost the same moment, yet in their underground life they are not in contact with each other, but each in its individual cave in the earth and apparently oblivious to the presence of others; and yet with the precision of a clock they all emerge at the end of the appointed time as if by some communicable impulse.

As the pupa burrows upward it leaves a small hole in the surface of the earth about the size of a little finger, and thousands of these holes will show just where the brood had been.



A remarkable picture showing the Cicada leaving his skin. This happens soon after the insects leave the ground, usually between nine and midnight.

If we had dug down into the ground during the early part of April last we would have found them very near the surface of the earth, all ready for their emergence later on.

One remarkable phase of the life of the Cicada is seen in the fact that under certain conditions they will construct little huts and cones of earth that will project above the surface of the ground as high as five inches. Millions of these little cones will be spread over the surrounding territory. If these cones are approached cautiously, and broken off near the top, the pupa will be found waiting for the time of emergence. There have been many reasons advanced for the building of these little huts, but the most plausible theory seems to be that they are built as an abode to avoid unusual dampness, and when we find that in the majority of cases they are built where the soil is unusually moist, this would seem to confirm this view. Whether from

these huts, or from the ground proper, the period of emergence is a sight never to be forgotten.

The pupae begin to emerge as soon as the sun has set, and like a mighty army they rush forth, the procession usually continuing until 9 P.M., by which time the bulk of them will have come forth, though some stragglers will continue to come until midnight. As they rush forward they quickly ascend the nearest bushes, weeds and trees, seemingly bent upon reaching an elevation above the ground, and here again we have a remarkable manifestation of instinct, for the same instinct that led them to burrow down in the earth seventeen years before, now impels them in the opposite direction, to enjoy for a season a brief aerial existence, reproduce their species, and then die.



The newly-emerged Cicada with its gauze-like wings folded close against its body, never having been spread

We have read of certain forms of insect life that are born, reach maturity, mate, reproduce, and die all in a few minutes; but here we have an insect that spends seventeen years underground for a matured existence above ground for about six weeks.

In about an hour after they have risen to some elevation, the skin splits down the middle of the thorax, and the forming Cicada comes forth. With the exception of its red eyes, the newly born Cicada is a creamy white, with a dash of black here and there on the prothorax, the coxae, and on the front of the femora, while a slightly orange hue adorns the base of the wings. Soon the wings begin to enlarge and expand, and in a little while they are beautifully transparent with the characteristic veins running through them. The time required for this transformation, from the splitting of the shell of the pupa to the perfect development of the wings, will vary from twenty minutes to two hours.

Though possessed with wings, the Cicada is slow in its movements, and this accounts for a particular brood being confined within certain well defined areas.

The adult Cicada seldom feeds, as food is not essential to its existence, but when it does, it shows a decided preference for the black birch and the sweet gum. This proves that the adult Cicada is really not to be feared, and any damage that is done to bushes and trees is accomplished by the female in her ovipositing the eggs. At any rate, the slight occasional feeding on the part of the adult Cicada seldom does the trees any permanent injury as, for instance, in the case of the San José scale louse.

The Cicada matures and becomes perfectly hardened during the first twenty-four hours of its aerial life, and the female does not lose much time in beginning her work of depositing her eggs to provide for another brood. Mating usually occurs within a week from emergence, and within two weeks the egg punctures will begin to appear on the trees and bushes, and often several thousand insects will be seen laying on a single tree at the same time. The eggs will be deposited in almost any of the trees and bushes at hand, though the insects show a decided aversion to pines. Twigs and branches of the previous year's growth are invariably selected for deposit of eggs, and where the insect uses the larger limbs, the eggs, instead of being placed in a long series of slits, are placed in nests of twos.

The damage from egg depositing is more likely to occur to oak, hickory, and young orchards, but in the case of large shade trees, the damage is slight and not worth bothering about. The old idea that the eggs of the Cicada caused limbs to break and fall away is due to confusing the work of the Cicada with the pruning-beetle, which cuts away the branches to provide dead wood in which its larvae may develop.

The work of the female Cicada in depositing her eggs is decidedly interesting, and may be observed without alarming her in the least. She usually selects a branch of such size as will permit her to clasp it firmly with her legs, and enable her at the same time to force her ovipositor into the tissue of the wood. She passes from limb to limb until she has completely exhausted her supply of eggs, which usually number about five hundred. The eggs are about one-twelfth of an inch long, nearly white, and covered with a thin transparent shell; they remain on the branch for about seven weeks, at the end of which the larval Cicada by muscular effort ruptures this shell and wiggles out upon the branch. Running about with the quick movements characteristic of the ant, it soon seeks the edge of the branch, when it deliberately throws itself to the ground, and though it is not injured by this, we have here a wonderful phenomenon of a helpless insect deliberately throwing itself out into space with no apparent

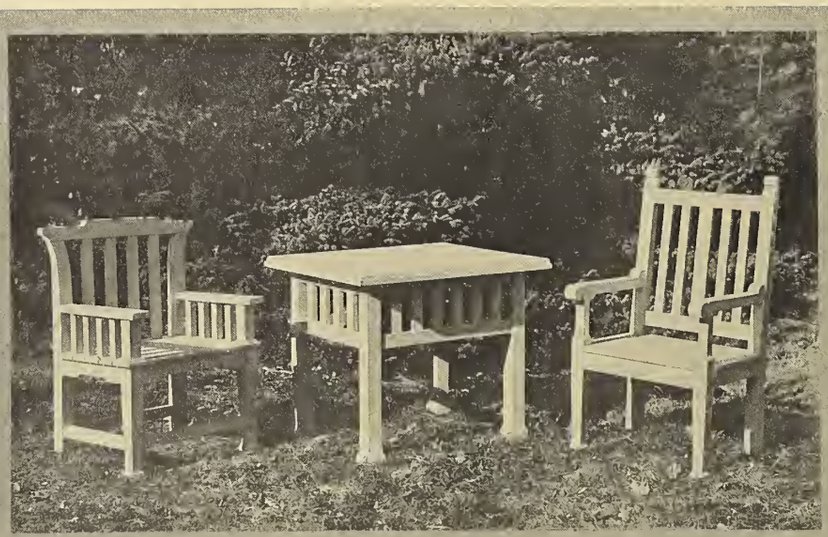


The Cicada in flight. It reaches this stage of maturity during the first twenty-four hours of its aerial life, after which no time is lost in preparation for another brood

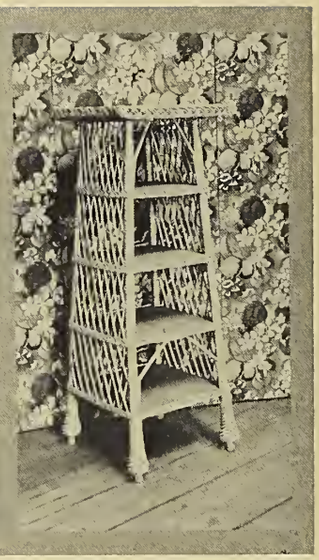
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One of the new patterns of willow chairs with arm-pockets open at the inside



For the garden room there are many new patterns in white-painted cypress furniture, a type that has long been popular in England



In addition to chairs and settees there are willow stands for magazines and books

Creating Outdoor Living-rooms

SOME OF THE NEW THINGS IN FURNITURE FOR THE PORCH AND GARDEN, TO MAKE MORE INVITING AND ENJOYABLE THE OPEN-AIR ROOMS OF THE COUNTRY HOME

BY SARAH LEYBURN COE

TIME was when the furniture for the front porch consisted of two, possibly three, hickory splint chairs of uncomfortable shape, and a long bench, painted sometimes red, sometimes green, according to the individual taste of the owner, while a few rustic boxes for vines and a funereal-looking urn or two ornamented the lawn.

The demand for outdoor life has naturally increased the supply of things that go to make for its enjoyment, and with the furniture especially designed for it an out-of-doors room bounded by the four sides of a piazza can be fitted up almost as completely as an apartment inside the house would be. One significant advantage of this furnished porch arrangement is that it can be made to do duty for any and all of the rooms in the house, serving in turn as living-room, dining-room, sewing-room, library, and even bedroom if necessary.

Willow furniture for the piazza is on the whole one of the most satisfactory kind, not only on account of its light weight but because it is impervious to dampness, being in fact waterproof, so that if left out in an unexpected shower it is not permanently damaged. A number of new pieces that add to the attractions of the outdoor room are shown this season. There is a metal-lined stand for growing plants, made of willow with open-work sides, that is decidedly ornamental and practical as well. A willow sewing-table, so light in weight that it is easily moved about, has two under-shelves and a deep pocket on either side, making it quite as useful for books and papers as for sewing-things.

An unusually comfortable porch chair is of light wood with high willow back and wooden arms, and another chair of new design that would also be an attractive piece of furniture for the hall or living-room has a wide cushioned seat, wing back and broad arms, underneath which are pockets that open inward and are really an extension of the chair seat. For books and papers there is a tall stand, square in shape, with four wooden shelves and a broad willow top that is also as serviceable for indoor as outdoor use.

Circular tables in willow may be had as large as six feet in diameter, furnishing accommodations for breakfast or luncheon parties of good size, and there is a large variety of tea tables and muffin-stands for serving afternoon tea on the piazza or in the garden. The tables are both oval and circular in shape, the newer ones having glass tops with willow frames and handles that form separate trays and are most attractive when the glass has a lining of gay-colored cretonne. Either as an accessory to the tea table or for general use on the piazza, is a folding willow screen with three leaves, only about three feet in height. It is one of the newest



Whether your home be large or small you will never regret some provision for a garden shelter



Rustic furniture continues to hold its own in popular favor, but the wood is now freed from all excrescences



With a background of a hedge or vine-covered wall, the white painted garden benches are seen at their best



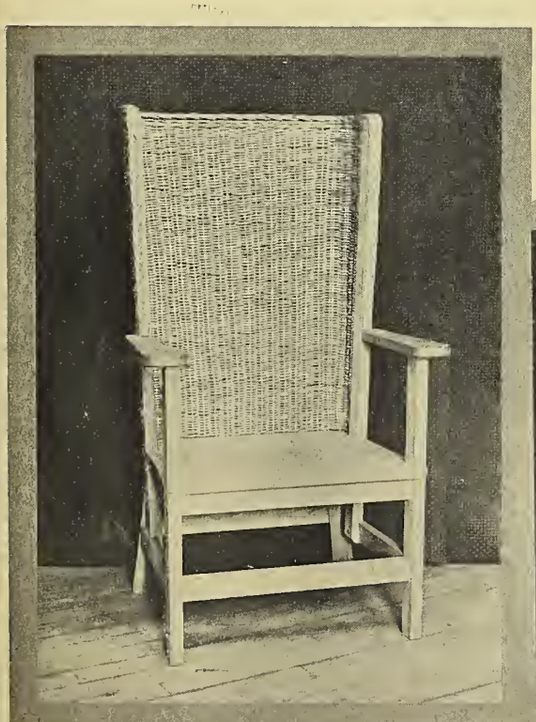
That one can now buy such attractive rose-arbors as this is cause for rejoicing among garden enthusiasts

designs and makes an effective piece of porch furniture.

In the way of floor covering for piazzas there are any number of rugs of cocoa fibre and prairie grass made for rough outdoor use. They come in sizes from three by six to nine by twelve feet, and in colors especially suitable—browns, greens, tans and reds, either in solid tones with contrasting borders or combinations of color in plain conventional patterns. Rather more ornate are some of the new rugs that show designs suggestive of Oriental carpets, the figures being on a much enlarged scale, while a rug that is decidedly Eastern in effect has a wide green border with tan center in which figures of elephants are woven in the same green as that of the border. A novelty this year is a hand-woven grass rug that is said to be wonderfully durable. It is half an inch thick and so heavy that it will lie perfectly flat no matter how hard the wind may blow, which is a consideration for persons whose summer homes are at the seashore. The colors are solid green or tan with a narrow conventional design in black that forms a border, and the rugs may be had either round or rectangular in shape. Small hassocks that are always useful on a porch are made with coverings to match the rugs.

Unless a house is wired for electricity the question of lighting the piazza is a more or less serious one, and lamps, or more probably candles, must be depended on to furnish the necessary illumination. There are of course lanterns in all sizes and shapes, from the old ship's lantern of heavy glass in a brass frame, picked up at the nearest curiosity shop, to elaborate affairs in wrought iron or bronze, but pleasing and picturesque as they may be, lanterns as a usual thing throw only a feeble light on their surroundings.

For real service there is a candle-lamp, purporting to be



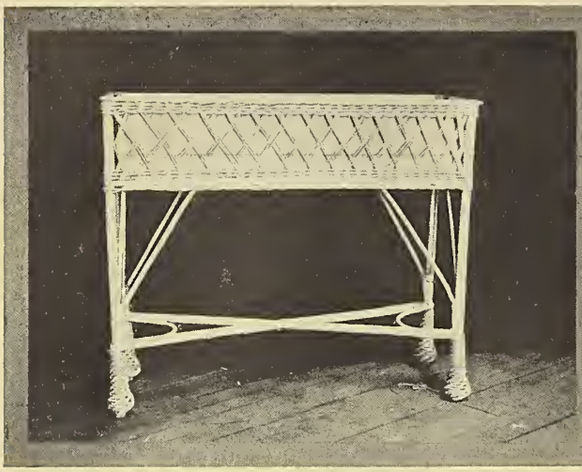
One type of porch chair is made in a combination of unstained wood and willow



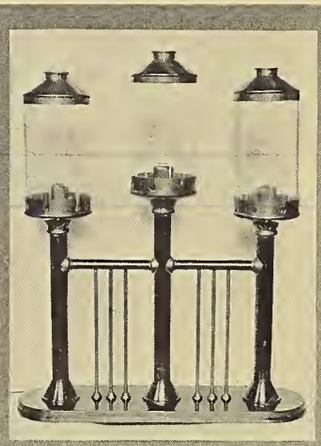
The porch sewing-table is another of the season's offerings in outdoor furnishing



A large umbrella of brown cotton with a stencil design shelters this garden table



In harmony with the other willow porch furniture is this zinc-lined plant box



White or red candle-lamps come with glass shields



Another one of the newest things for the porch is this three-panel screen of willow

English in its origin, that seems to be particularly adapted to outdoor use. The stand is of heavy tin, painted either white or red; there is glass wind-shield with a perforated top of tin, and the candle fits into the holder with a spring just like those used in candlesticks for the dining-table. The candle burns steadily without being affected by the wind, and gives just light enough for comfort without making the piazza too bright. The lamps are made in several different styles, with holder for a single candle, for two candles, or for three as in the illustration. These are all for use on the piazza table, but there is a much larger size on a tall standard that rests directly on the floor, with holders for three candles, the whole arrangement being about five feet high.

As a sort of companion piece for this tall lamp there is a clock for use on the piazza or lawn. It is about the same height as the lamp and like it is painted a bright red. On top of the tall standard is a hollow metal ball that contains the works of the clock, and on one side of the bell which is slightly flattened, is the clock's face in white, with heavy black figures that are visible at a considerable distance, making it quite useful even on extensive grounds.

The lure of garden and lawn furniture is even stronger, when one begins to investigate the possibilities, than that of porch furniture. The one in a way is merely a reproduction of the familiar household things that are necessities; the other opens up a fascinating array of objects that are real luxuries. From the single box for an ornamental tree, or a garden seat or chair, up to the elaborate rustic summer-house, substantially built and complete with roof and floor, each one makes an irresistable appeal to the person who has a bit of ground large enough to accommodate it.

Rustic furniture, stained green or brown is always attractive in out-of-door surroundings of any sort, although the chairs and tables and seats of planed wood are doubtless more suitable for the formal garden, and can be used for porch furnishings as well. There is of necessity little variety in the shape and design of the rustic pieces, and all are built on substantial lines with frames of bark-covered wood and seats made of smooth boards. The lawn tennis bench with sides but no back is rather a novelty; so is the double rustic bench which has seats placed back to back, and also the rustic seat that has a roof covered with cedar bark. This design is reproduced in the more formal furniture which is made of cypress, and there are, besides, many different styles in cypress seats for garden and lawn, some straight, some curved, and others built to fit corners, as well as the circular seats made in sections to go around trees.

Many of the seats are copies of old English pieces; others are modern and of quite recent design, but equally picturesque. Tables and chairs are made in models that harmonize well with the different seats, and all of this furniture is painted white or green, in either a light or dark shade. More elaborate are the rose-arbors and arches built to span paths, some of them with a seat at either side. These too can be had in practically the same designs and in colors to match the other pieces of lawn furniture.



A particular graceful curved seat of cypress to place in front of a shrubbery group



These cypress seats are made also for corners, in semi-circular form or to encircle a tree trunk

Few householders are so fortunate as the owner of a lovely place in Southern California who utilized a palm tree as a summer-house in which to serve afternoon tea. A table was built around the trunk of the tree and masses of vines trained from the ground to meet the lower branches, so that in a short while he had a completely enclosed arbor, protected from the sun by the thick growth of palm branches overhead. A rather good substitute may be had however, in the big lawn umbrella with a table underneath it. One style shows a willow table shaped like an hour-glass, with a hole through the center for the handle of the umbrella, which is made of heavy brown cotton material and decorated with a stenciled border in light tan. Another is much larger and better adapted to all sorts of weather. The table has an iron standard with a circular top of heavy tin, painted white, and the umbrella is a huge affair

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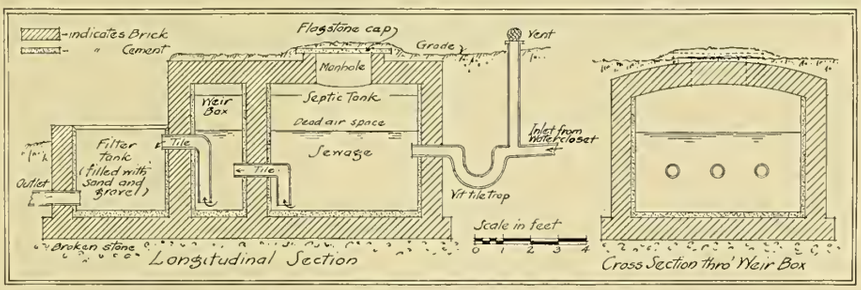
The Sewage Disposal Problem on the Country Place

THE SEPTIC TANK AND HOW IT ACCOMPLISHES THE COMPLETE AUTOMATIC DESTRUCTION OF SEWAGE WITHOUT ANY ATTENTION WHATEVER AFTER THE INSTALLATION

BY RICHARD MAXWELL WINANS.

ANY argument to prove the need of proper sewage disposal is superfluous, or should be. Every suburban or country home not having connection with a common sewer ought to be provided with some arrangement to dispose of its sewage in a sanitary manner; and every intelligent person should recognize the necessity, not only as a matter of simple sanitation, but in the vastly more important matter of health, which last in this connection depends largely upon the first.

In this day of advancement and improvements there is no excuse for the old-fashioned privy vault, or even the common type of earth closet, for even this last, which is admittedly an improvement on the ordinary vault, is a germ-breeding trap to a great extent, and full of the possibilities of disease at the best.



The whole septic tank as shown by the two sections is underground, with the exception of the filter bed; to this the air has access at the top. The size of the septic tank proper will be governed by the size of the household

While the delights and many of the advantages of living in the suburbs and the open country are beyond a mere matter of comparison with city dwelling, yet statistics show that there is a greater percentage of sickness and a much higher death rate in the country than in the most congested cities. It has been shown, too, that the number of contagious diseases is greatly increased in the suburban and rural districts by a gross lack of sanitary arrangements about the homes, and that much of the general sickness is caused directly or semi-directly by such neglect.

It is declared that if unsanitary conditions were tolerated in the city such as are too generally found about many of the suburban and country homes, the general health of the city dweller would be so far depleted and destroyed that a plague might quickly result, while the death rate would increase to a most alarming degree.

The methods of sanitation in the cities are scientific and practical and their efficiency is enforced by the board of health. In many of the outlying suburbs and in the rural districts the methods, or, too frequently, the lack of methods, are altogether governed by the individual inclination, or his knowledge of methods, to secure more or less perfect sanitation.

On an extensive and pretentious country estate in the East with which the writer is acquainted, having a splendid large mansion, fitted with an artificial cooling plant, mechanical refrigeration, exhaust ventilation, the finest of plumbing and the most elaborate of everything in ultra-modern equipment and conveniences, with a five-hundred-barrel water supply tank kept constantly filled by an automatic cut-off-and-on electric motor, horse and cattle barns representing the last word in construction, with over-head carrier arrangements to dump all stable wastes directly into wagons for removal daily, and cement gutters automatically flushed to prevent stable odors in the dairy—and yet—the sewage from the kitchen sinks and the sanitary closets in the house empty from a line of tile at the foot of the hill on which the house stands, not more than fifty yards distant from the kitchen door. The sewage was supposed to be distributed in surface irrigation through an orchard and garden, although the sewage flume was generally clogged and overflowing at the house end.

That was their method of sanitary sewage disposal, or, rather, the remarkable lack of it.

In the West, on the other hand, the writer visited a modest little country home where a wind-wheel furnished a water supply to the house as well as stables, and not far from the house, covered with a sodded mound of earth, partially hidden by a group of shrubs and rose bushes, was a sunken septic sewage disposal tank similar to the one shown in the accompanying drawing, that converted the kitchen wastes and the sewage from the sanitary closets into a liquid stream of water carried through tile to a nearby brooklet.

It is not an open question as to which home owner manifested the most intelligent judgment in his methods of sanitation.

One of the first material essentials connected with the installation of the system of sewage disposal known as the septic tank, is a supply of running water, either from an elevated tank or forced through the house by the pressure system.

Nearly all suburban homes are, or may be, provided with a running water supply, as are the majority of modern country homes with which the writer is familiar. On many of the ordinary farms in out-of-the-way places there is an elevated water supply for the use of the live-stock and dairy, and in not a few instances it is provided for the house also—and in every instance could be.

Should the elevated tank system of supply appear too unsightly for the suburban home, there is the more desirable pressure system, with the supply tank placed in the cellar of the house, or in a covered pit built for its accommodation.

For pumping water up into the elevated tank or forcing it into the air-pressure tank there are several powers that may be economically employed, the wind-wheel probably being the cheapest form, and one that requires the least attention, since automatic devices are now in use to stop the wheel pumping when the water in the tank reaches a designated point or the pressure-gauge indicates the necessary number of pounds in the air-pressure tank, and starts it again vice versa.

Where electric current is available, as it is quite generally through most suburban sections, a light-capacity motor will do the work. A small gasoline engine is at once practical and economical, while in several known instances the automobile is hitched up for this work while it is resting. The principal expense in the installation of a private water works system is generally in the plumbing and fixtures rather than in the original cost of the supply equipment, which, once properly established, is good for an indefinite service.

Having a water supply, the best method of sewage disposal for the suburban or country home is the septic tank. There are a number of differing styles of this tank, but in its simplest form the type is as shown by the diagram. The tank has for its purpose the accomplishment of one object, the conversion of sewage, both solids and liquids, into practically pure water through self destruc-

(*Continued on page 466*)

A Vegetable Garden That Will Survive the Fall Frosts

WHY NOT SOW A PATCH THAT WILL MAKE THE GARDEN AS PROFITABLE AND ATTRACTIVE IN THE FALL AS IT IS IN THE SUMMER?



Here is a single plant of parsley, pulled a week after a killing frost

BY I. M. ANGELL

Photographs by the Author

IF the amateur gardener wants a vegetable patch that will be fresh and flourishing long after his neighbor's garden is a desolate heap, he must sow the frost-defying kinds. The right sorts, sowed at the right time, will give him a garden that will be a thing of beauty after tender vegetables have passed their usefulness and become an eyesore. More than a dozen hardy vegetables may be selected, with the certainty of having a frost-proof vegetable garden.

BEETS, sowed in June, will be in good shape to pull, for winter storing, soon after the first frost. The conditions demanded by all root crops will meet the requirements of beets; such as fresh loose soil that is clean and light, with well rotted manure that has passed the fermenting stage, or a potash fertilizer. Long before frost this June planting will be yielding greens and tender young roots. In order to preserve the appearance of the row right up to the end of the season, it is a good plan to thin gradually, beginning when the plants are three inches high, to an inch apart, and continuing to two, four, and eight inches, as they become larger. These gradual thinnings will give many a good "mess" of greens and sweet young beets that would otherwise be wasted, if removed in a wholesale thinning that is done once for all.

CARROTS, both young and mature roots, should have a place in the frost-proof garden. For a crop that will reach full size and be suitable to store for winter, sowings should be made in June, but for young roots, for table use, July sowings, or even an August 1st sowing, will give satisfactory returns, although August would be late to risk it if the season proved to be unfavorable. For a supply of carrots throughout the season, to be pulled while still small, for their sweet and tender qualities, there is no better variety than Early Scarlet Horn. Warm, friable soil and the same general conditions as are required by beets will give good results. Dry weather is a drawback.

CABBAGE, BRUSSELS SPROUTS AND KOHLRABI are all related and need similar treatment. Sown purposely for the frost-resisting patch, seed may be put in about the middle of June. As conditions are not so favorable at this season as during the spring months, it will pay to be a little more free with the seed, to allow for the loss of some of the seedlings. Soil that still retains richness from an earlier planting of vegetables will answer, or if there is any doubt about sufficient richness, well decayed manure should be used. The soil must be kept loose, and wood ashes sprinkled as a precaution against the attacks of insects. At the end of July the young plants ought to be ready to set in their permanent place, in moist earth, with the soil pressed around the stems. Short stocky plants will produce better results than spindling ones. Kohlrabi is sometimes sown in hills, a few inches apart, a small pinch of seed to each hill, and all but the best plant pulled out when they reach a suitable size. Kohlrabi is often gathered too large and so fails to be appreciated at its real worth. Bulbs two or three inches in diameter are very sweet and tender, a great improvement on larger roots that have been allowed to become tough and fibrous. This vegetable is one of the old reliables, as it will stand both frost and dry weather. There need be no hesitation in adding Brussels sprouts to the cold weather garden, as frost improves the flavor. June-sown seed will produce plants that will be in bearing in November.



The garden that bore in abundance after frost had killed the tender vegetables. The picture was taken four days after a severe frost

CHIVES, ONIONS AND LEEKS are relatives and all useful for the frost-defying gardens, as they are among the hardiest. An early September sowing of ball onions may be made, for the purpose of wintering over; they will start into growth again in the spring. To ensure success the patch must be well drained and no weeds should be allowed to get ahead of the onions. The best seed, thickly sowed, and thinned out, will pay in the end. The soil should be old and mellow, well enriched with cow ma-

nure and wood ashes. Chives are as ornamental as they are useful. Being perennials that make a thick growth of leaves, and produce a quality of decorative blossoms in June, they can well be used for an edging in the vegetable garden where they will be handy to cut freely for use in soups, stews and salads. They require the same treatment as onions; it is best not to sow the seed too deep. Leeks, for fall and winter eating, may be sowed in June. As soon as they reach the proper size they should be thinned to four inches apart and later earthed up to blanch the stems. When cold weather comes they may be left to pull as needed, being very hardy, but it is probably better to dig them up and store in a coldframe, on account of the difficulty of pulling when the ground freezes.

Lettuce, sowed for late use and properly treated, rewards the gardener with some of the choicest heads of the season. A piece of ground must be carefully prepared with rich old manure, at the rate of a bushel to a square yard. If there should be no location available where the soil is moist and partially shaded, artificial shading will produce good results. Seed should be sowed a half-inch deep. When a couple of inches high the seedlings should be thinned to an inch apart, and kept thinned, just as fast as they grow to touch each other. These thinnings need not be despised for table use. Light doses of nitrate of soda will encourage rapid growth. In order to give a late sowing every chance of success,



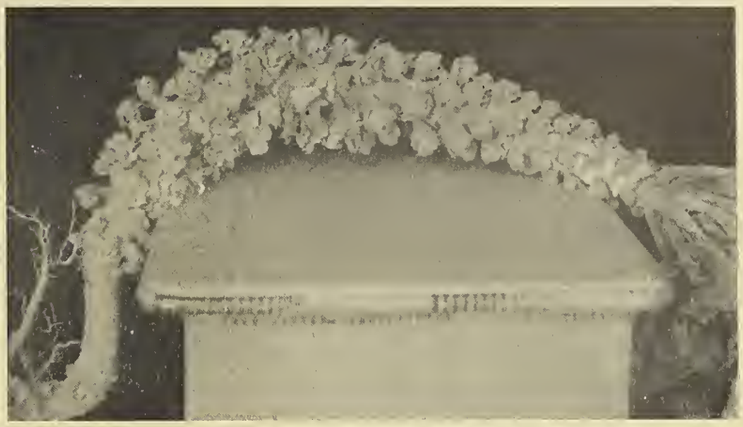
There is no need whatever of allowing the garden to be unproductive late in the autumn. This bunch of varied products was gathered several days after frost had laid low the tender plants

a six-inch trench can be prepared and filled with water; as this is absorbed it should be refilled several times, until the soil is soaked. Then the trench should be filled with soil that is merely moist and the seed sowed. A board, raised two inches on bricks, will give the required shade for the first few days; later the bricks can be turned to raise the board four inches. When the sun gets low in the afternoon, the board may be removed till the next morning, and as the plants increase in size, the shade can be dispensed with. August 1st is a good time to sow fall lettuce; even an early September planting has produced good results.

Parsley may be made to send out a new growth for the embellishment of a frost-proof garden, by cutting back in the middle of September. Seed stalks must be cut to prolong the bearing season of old plants.

Spinach can be added to the frost-resisting garden. When gathering the early sowings, instead of pulling up the entire plant, each one should be cut back, and they will send out a new growth that will flourish till frost. A satisfactory kind is the New Zealand type, well cultivated and kept free from weeds.

Salsify, of iron-clad hardiness, may be left in the ground all winter and used in early spring before growth begins. Some of the crop should be stored in sand, for use in cold weather. General treatment should be the same as for carrots.



Brussels sprouts is one of the iron-clad vegetables for the cold-weather garden. Picked outdoors Dec. 20th

Parsnip, another hardy inmate of the frost garden, also requires the same treatment as carrots and other root crops.

Turnips for the fall garden patch should be sowed from the middle of July to the middle of August. A moist, loose soil will suit them best. For fighting off the flea-beetle Bordeaux mixture is excellent. Although hardy, turnips are better dug for fall protection before any severe frosts. The rutabaga type of turnips should be sowed the last of June and harvested in October.

Celery requires a good garden loam and plenty of water. A soil that is sandy, and rich with manure in the proper condition to hold moisture well, will agree with this vegetable. The amateur gardener may sow seed in April for fall use. In June the plants will be ready to cut back and transplant. For home storing, boxes containing a few inches of soil for the roots, and holes in the sides for ventilating, will be all-sufficient.

Radishes may be used for early fall sowings in soil that is rich and loose. Wood ashes, sprinkled after the sowing, will keep off insects. Store radishes are never worth buying, for they should not be more than an hour from garden to table.

Chard retains its good looks after frost. Both leaves and stems are used, cooked like greens and asparagus. The stems are also packed in brine, for winter use. Lucullus is a choice variety.

Endive, sowed in June or later, will add another hardy sort to the frost-defying garden.

Kale is a worthy member of the cold-weather family. Left in the garden, for use in the cold months, it will keep up an extended supply of greens. It should be sown in June and transplanted to stand a half-yard apart. Freezing improves it, and its decorative

(*Continued on page* 470)



Victoria spinach and White Egg turnips were among the survivors in the frost-resisting vegetable patch



A screened porch was built across one end of the old structure, reached through a doorway from the living-room. A covering of shingles, dipped in a silvery gray stain, was put on over the original clapboards

Remodeling an Old Long Island Farmhouse

WHAT HAS BEEN DONE WITH AN OLD HOUSE AND THREE ACRES THAT WERE BOUGHT FOR $1,200—THE EXPERIENCE OF A CITY WOMAN WHO MADE A COUNTRY HOME

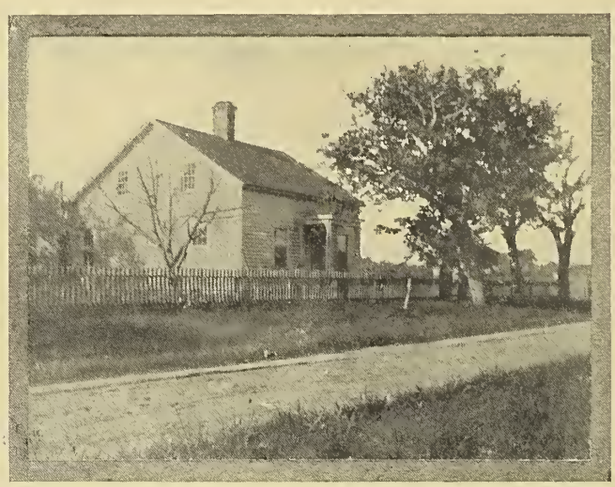
BY ALICE BOUGHTON

Photographs by the Author

HALF-WAY down the south shore of Long Island was a square, rather ugly, little box of a house, situated in a small fishing village. Somehow or other the mushroom development companies, and the tide of suburban homeseekers, overlooked this place in their advance upon the Island and left the town unmarred, still retaining all its original charm. About five years ago a young woman, whose work was in the city, became seized with the desire to own a real country home. In her peregrinations after something that at the same time fitted her pocketbook as well as her ideal, she happened upon this house. Crude and ugly as it was, she saw it remodeled, in imagination, into the very likeness of her dreams. It would be hers—the fruit of her labor and the outgrowth of her plans! And so it became.

The house and three acres were bought for $1,200 and she at once set about the work of remodeling it according to her own ideas and taste. In this she was assisted by a young student of architecture who happened to be a very good carpenter. He had just completed his first year's instruction and was very glad to spend his vacation in work along similar lines to the study which he had been persuing at the university.

They consulted and planned together and after plenty of good hard work succeeded. The young woman leaded the windows, dipped and nailed the shingles, painted floors, lathed, and in an emergency carried on her bicycle all sorts of building materials from the town three miles away. The student drew plans for stairs, windows, doors and other details and sent them to a mill in a neighboring town where they were made and delivered with the lumber, at one-quarter of the expense estimated by local builders.



The old house was very small, boxlike, and with little provision for lighting the second-story rooms

The original house, though ugly, was well built, with a good foundation and the cellar had a bricked and cemented floor and sides. The beams were apparently taken from some wreck that had found its resting place upon the coast and were of hard weathered oak. In places the timbers were caulked as they were originally when aboard ship. The exterior was finished with the ubiquitous clapboards.

With this to work upon they set about the labor of transformation. Two large dormer windows and two small ones and an annex were



A new flight of stairs was put in at one end of the living-room—the latter combining the old parlor, sitting-room and hall

added, changing the stiff, chunky, plain appearance of the original house to one of pleasing lines and diversified surface. The extension contained the kitchen, laundry and servant's room on the ground floor, and a bathroom and bedroom upstairs, thus making the advantageous arrangement of a small house with the kitchen department somewhat separate from the living-rooms. A tank was put in above the upstairs hall, where it rested upon the rafters, and was supplied with water pumped by a hot-air engine installed in the cellar. Over the clapboards an additional covering of shingles was put. They were dipped in a silver gray stain made of kerosene with white lead, toned with black and Indian red, mixed thin like a wash. This gave a beautiful weather stain. To harmonize with this the old solid-wood outside shutters were painted a blue green.

With the room scheme few alterations of a difficult character were necessary. The parlor with its inviolate gloom, the "settin" room, and the hall were shorn of their partitions, making a big, airy, inviting place, really meant to live in. Two windows of ordinary size in the western end of the room were joined together, giving a wider outlook and heightening the cheerful, outdoor "feel" of the place. At one end of this living-room a new flight of steps was built to take the place of those taken out of what was formerly the hall. Filled with a well proportioned balustrade they had a decidedly decorative effect. The dining-room with its screened veranda, which in season is used for meals, the small den opening out of it—sometimes used as an overflow bedroom—and laundry, servant's room and kitchen, completed the arrangement of the lower floor.



In the gardening end of the remodeling activities the aim is to preserve the informal and simple flavor of the garden that surrounded the home long ago

The addition of dormer windows in the front roof was and always will be a difficult problem. It was, however, the only way of lighting the bedrooms adequately

The kitchen, as it appears now, is the really unique corner of the house. It is blue and white; a grayish-white rough plaster with a frieze of blue flamingoes and trees, stenciled upon it. The woodwork is a china blue, the closets blue with tree design in white, and the floor-covering blue and white tile-linoleum. The pump at one end of the sink, and the draining-board for dishes at the other end next to the closet, simplify the work and save steps. Lately a fireless cooker has been added, likewise painted blue, and rolled under the draining-board to be out of the way.



The new kitchen is one of the most attractive parts of the remodeled house, with its rough gray plaster and stenciled frieze

The decorations also showed the same selection, first of utility and then beauty. The rough plastered walls of the living-room were treated with a neutral greenish tone that would not tire one. The chimney was left in the original rough brick and the floor painted a harmonious dull-red tile color. The dining-room, being small, was painted white, and had its Colonial character increased by old articles taken from other parts of the house—a corner-cupboard made of sheathing, and shelves for dishes around the top of the room, which were formerly the little old wooden mantel-shelves. The colored plates and jugs now rest on these, forming the most fitting kind of decoration. Over the mantle is a mirror, the panels on the side painted directly on the glass. The curtains in this room, as well as throughout the house, are made of unbleached cotton and stenciled with water-color mixed with white of egg and then ironed. This sets the color and it never comes out, even in the wash.

Since the strictest economy had to be maintained,

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Achieving Distinction in Summer Hangings

THE NEED FOR SOFTENING THE LINES OF THE MODERN WINDOW OPENINGS, TOO OFTEN MERE HOLES IN THE WALL—METHODS OF HANGING AND THE AVAILABLE MATERIALS



When sash curtains are used in this way the upper one should cover the rod of the lower

BY LUCY ABBOT THROOP

Photographs by Jessie Tarbox Beals and Others

THE modern window, with its huge panes of glass and simple framework, makes an insistent demand for curtains. Without curtains windows of this kind give a blank, staring appearance to the room and also a sense of insecurity in having so many holes in the walls. The beautiful windows of the seventeenth and eighteenth centuries in Italy, England and France, give no such feeling of incompleteness, for their well-carved frames and over-windows, and their small panes of glass, were important parts of the decorative scheme. Windows and doors were more than mere openings in those days, but things have changed, and the hard lines of our perfectly useful windows get on our nerves if we do not soften them with drapery. In that hopeless time in the last century called "Early Victorian," when black walnut reigned supreme, the curtains were as terrifying as the curves of the furniture and the colors of the carpets. Luckily most of us know only from pictures what that time was, but we all have seen enough remnants of its past glories to be thankful for modern ways and days. The over-draped, stuffy, upholstered nightmares have entirely disappeared, and in their place have come curtains of a high standard of beauty and practicality—simple, appropriate, and serving the ends they were intended for.

The effect of curtains must be taken into account from both the outside and the inside of the house. The outside view should show a general similarity of appearance in the windows of each story, in the manner of hanging the curtains and also of material. The shades throughout the house should be of the same color, and if a different color is needed inside for the sake of the color scheme, either two shades should be used or they should be the double-faced kind. Shades should also be kept drawn down to the same line, or else be rolled up out of sight, for there is nothing that gives a more ill-kept look to a house than having the shades and curtains at any haphazard height or angle.

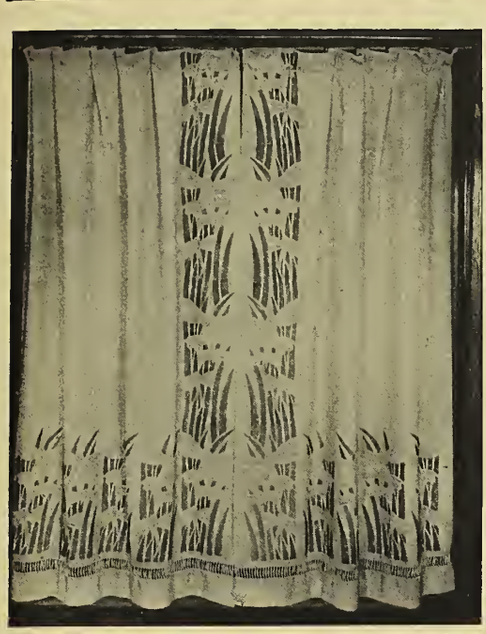
And now to "return to our muttons." The average window needs two sets of curtains and a shade. Sometimes a thin net or lace curtain, a "bonne femme," is hung close to the glass, but this is usual only in cities where privacy has to be maintained by main force, or where the curtains of a floor differ greatly. Thin curtains in combination with side curtains of some thicker material are most often used.

Curtains either make or mar a room, and they should be carefully planned to make it a perfect whole. They must be so convincingly right that one only thinks at first how restful and pleasant and charming the whole room is; the details come later. When curtains stand out and astound one, they are wrong. It is not upholstery one is trying to display, but to make a perfect background for one's furniture, one's pictures and one's friends.

There are so many materials to choose from that all tastes and purses can be suited. Nets begin at about twenty cents a yard and go up to two or three dollars; scrims and batistes also vary in price; then there are cotton and silk crepes, muslin or dotted Swiss, cheesecloth, soleil cloth, madras, and a host of other fascinating fabrics that may be used in any room of the house. The ready-made curtains are also most charming. There are muslin curtains with appliqué borders cut from flowered cretonne; sometimes the cretonne is appliqué on net which is let into the curtain with a four-inch hem at the bottom and sides. A simpler style has a band of flowered muslin sewed on the white muslin, or used as a ruffle. It is also added to the valance. There are many kinds of net and lace curtains ready for use that will harmonize with any kind of room. Some of the expensive ones are really beautiful examples of needlecraft, with lace medallions and insertions and embroidery stitches.

When it comes to the question of side curtains the supply to choose from is almost unlimited, and this great supply forms the bog in which so many are lost. A thing may be beautiful in itself and yet cause woe and havoc in an otherwise charming room. There are linens of all prices, and cretonnes, both the inexpensive kind and the wonderful shadow ones; there are silks and velvets and velours, aurora cloth, cotton crêpe and arras cloth, and a thousand other beautiful stuffs that are cheap or medium-priced or expensive, whose names only the shopman knows, but which win our admiration from afar. The curtains for a summer house are usually of less valuable materials than those for a winter house, and this is as it should be, for winter life is usually more formal than summer life. Nothing can be prettier, however, for a country house than cretonne. It is fresh and dainty and gives a cool and delightful air to a room. Among the many designs there are some for every style of decoration.

The height and size of a room must be taken into account in hanging curtains, for with their aid, and also that of wall paper, we can often change a room of bad proportions to one of seemingly good ones. If a room is very low, a stripe more or less marked in the design, and the curtains straight to the floor, will make it seem higher. A high room can have the curtains reach only to the sills with a valance across the top. This style may be



Stenciling curtains for summer use requires very little labor, considering the effects obtainable

used in a fairly low room if the curtain material is chosen with discretion and is not of a marked design. If the windows are narrow they can be made to seem wider by having the rod for the side curtains extend about eight inches on each side of the window, and the curtain cover the frame and a part of the wall. This leaves all the window for light and air. A valance connecting the side curtains and covering the top of the net curtains will also make the window seem broader. A group of three windows can be treated as one by using only one pair of side curtains with a connecting ruffle, and a pair of net curtains at each window. Curtains may hang in straight lines or be simply looped back, but fancy festooning is not permissible. There is another attractive method of dividing the curtains in halves, the upper sections to hang so they just cover the brass rod for the lower sections, which are pushed back at the sides. These lower sections, which have the rod on which they are run fastened to the window-sash if one wishes. They will then go up with the window and of course keep clean much longer, but to my mind it is not so alluring as a gently blowing curtain on a hot day. I have seen a whole house curtained most charmingly in this manner, with curtains of unbleached muslin edged with a narrow little ruffle. They hung close to the glass and reached just to the sill with the lower part pushed back at the sides. The outside view was most attractive, and the inside curtains varied according to the needs of each room.

Casement windows should have the muslin curtains drawn back with a cord or a muslin band, and the side curtains should hang straight, with a little top ruffle. The muslin curtains may be left out entirely if one wishes. Net curtains on French doors should be run on small brass rods at top and bottom, and the heavy curtains that are drawn together at night for privacy's sake should be so hung that they will not interfere with the opening of the door. There should be plenty of room under all ruffles or shaped valances where the curtains are to be drawn to allow for easy working of the cords, otherwise tempers are liable to be suddenly lost.



Cretonne steadily gains favor. For French windows, have the main rod long, to keep the curtains back from the opening

All windows over eighteen inches wide need two curtains, and the average allowance of fullness is at least twice the width of the window for net and any very soft material, while once and a half is usually enough for material with more body. Great care must be taken to measure curtains correctly and have them cut evenly. It is also a good plan to allow for extra length, which can be folded into the top hem and will not show but will allow for shrinking.

Stenciling can be very attractively used for curtains and portieres for country houses. Cheesecloth, scrim, aurora cloth, pongee, linen and velours, are a few of the materials that can be used. The design and kind of material used in a room should be

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There is a pseudo-valance here—a short length of cretonne hung on the same rod



The shaped valance is coming into favor again. Allow plenty of room inside of it



Occasionally the side curtains extend to the floor rather than only to the sill line



The strangely fascinating calceolaria is one of the many things that may be carried over the summer in the sand-box to bloom next winter indoors

Summering the More Tender House Plants

BY IDA D. BENNETT

Photograph by R. R. Raymoth

WHAT to do with the house plants during summer is often a vexing question. Even where there is a greenhouse or conservatory it is of little practical assistance during the hot summer months, when the glass creates a temperature inimical to the interests of anything less addicted to heat than the phœnix or a salamander.

Certain house plants, to be sure, may be turned out in the border, or plunged, pot and all, into the ground in some shady place, but there are many other plants to which this half-heroic treatment would mean death or at best a serious deterioration. Among these may be included the cinnerarias which may be carried over, the calceolarias, primroses, and all the tender young things which have been started from seed in early spring for the purpose of stocking next winter's window-garden or conservatory.

For all such plants there is but one satisfactory place, and that is a sand-box. To this the treasures of the window-garden may be intrusted with the certainty that the fall will find them in the pink of condition for winter blooming.

The best location for the sand-box is on the east side of the house, where there is also some shade from the south, so that while receiving the morning sun in sufficient quantity to keep the plants thrifty, there will not be so much as to overheat the young and tender ones.

Where the east side of the house affords no convenient place—as when the house fronts the east, there may be found a convenient spot under the shade of a tree whose foliage is not so dense as to shut out the sun and air too much. Such a position will often give very good results, but no position should be chosen which is entirely devoid of sunshine during at least a portion of the forenoon.

Any shallow box may be converted into a sand-box, or one may be kept in it; for many plants four inches would be amply deep. than six or eight inches deep, according to the plants that are to be kept in it; for many plants four inches would me amply deep. It should be of a width convenient to reach across when sitting in a chair beside it, for much time will be spent here attending to the wants of the plants, as its convenience, accessibility, coolness and fascination tempts one to linger in so agreeable a nook, and insures to the plants a care they would not receive elsewhere.

When specially constructed for the purpose it may have a lining of zinc to insure its being watertight and also to add to its longevity. Boxes constructed wholly of wood and kept constantly wet under a hot sun decay rapidly and are, therefore, short-lived; the bottoms warp and curl up and become uneven, much to the inconvenience of the worker. It should, when made of zinc, be fitted with a drain at the bottom for the escape of surplus water in a season of too great humidity, and if the box is entirely of wood but of good and close construction it will be well to make a hole at one corner of the bottom and fit it with a plug for the same purpose.

The box must be elevated on supports of some nature—either permanent legs, a couple of saw-horses or blocks of wood; it must be of a convenient height to sit at when at work, and the space beneath may be utilized for the storing of pots and other paraphernalia that will be needed in repotting and otherwise caring for the contents of the box.

Packing boxes may be utilized for the purpose, and if puttied over the seams and given a coat of paint or some preservative on the inside, will last for several years and give good service.

The outside of the boxes may be made attractive with paint or in some other way. It is sometimes possible to secure lichen-covered wood—as boards from an old fence; some of these are really beautiful and have the advantage of growing more beautiful with age, as the moisture about them tends to the health and growth of the lichens with which they are covered and makes them more attractive than artificial decoration.

The sand-box should be filled with clean white sand—that from the lakes is best; the yellow sand should not be used, as it contains much clay, which hardens when the box happens to become dry and is not desirable. Into this the pots are plunged to the rim and the sand brought up snugly around them. The sand must be kept constantly wet, which maintains a moist, cool temperature around the roots of the plants, and the evaporation of the moisture from the sand's surface creates an atmosphere very conducive to the health of the plant, at the same time tempering the heat of the sun so that the very best conditions for growth exist. I have never seen a plant that would not thrive in this sit-

(*Continued on page* 474)



Where stone is cheap and not beautiful in itself, a stucco covering for it will result in an effective and durable house. Duhring, Okie & Ziegler, architects



One way of avoiding monotony of a stucco house is to use this material in combination with stone or half-timber. Duhring, Okie & Ziegler, architects

New-Old Possibilities in Stucco Houses

METHODS OF SECURING INTERESTING TEXTURES IN THE SURFACES OF STUCCO WALLS—LESSONS FROM THE PAST IN ITALY AND ENGLAND—PARGE WORK AND SGRAFFITO

BY HAROLD DONALDSON EBERLEIN

Illustrations by L. H. Dreyer and others, and from "The Art of the Plasterer"

[Two houses that are alike in every respect but the stucco walls, may be almost as dissimilar in appearance as if one were of stone and the other of wood. The best use of wall materials is a subject of as great importance as the architectural style that is to be followed, yet the layman, as a rule, seems not to appreciate this fact; to him a stucco house is merely a stucco house—until he realizes that his finished home falls far short of his ideal. This article is the fourth of a short series, in which the aim is to make clear the possibilities in securing distinctive character through an intelligent use of the various building materials. The author wishes to give credit to Mr. H. L. Duhring, architect, for many helpful suggestions.—EDITOR.]

WE live in a cement age—so we are told repeatedly, and a casual glance in almost any direction confirms it. Cement work of some sort is everywhere in evidence. Not so very long ago ardent cement enthusiasts were confidently predicting that concrete would soon utterly supplant all other building materials, and that brick, stone and wood would scarcely be heard of for structural purposes. Notwithstanding the steadily increasing use of cement, the supplanting has not yet come to pass, nor is it ever likely to, for all the wonted building stuffs have their appropriate uses and their legitimate places from which they will not be ousted. It were well, however, to consider the special fitness of cement and concrete for certain ends, and the prospective house-builder, if he is wise, will thoughtfully ask himself, "Shall I use cement in the construction of my house, in the form of either concrete or stucco?" His answer will be reached after duly weighing the pros and cons, some of them, perhaps, affecting only his own particular case, but others of a more general nature.

Among the manifest advantages of concrete construction are to be reckoned immunity from fire, durability, exemption from frequent repair expenses, such as painting for a frame house or pointing for masonry, comparative evenness of indoor temperature because of the non-conducting properties of concrete and sundry other desiderata. Against these may be measured some limitations, though several of them are entirely surmountable.

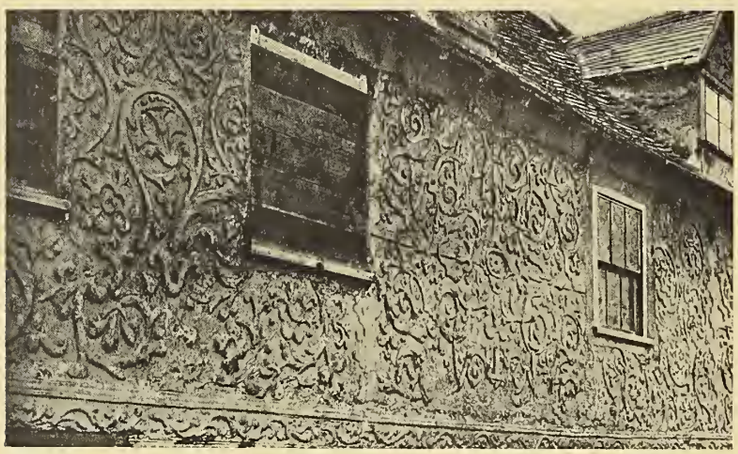
We must understand clearly what we mean by the terms concrete, stucco and plaster. Concrete is a carefully proportioned mixture of cement, sand and gravel, or, in some cases, small stones, combined with a necessary quantity of water. This mixture after being well worked is poured into moulds or forms to harden and, when set, makes a wall of one solid piece. When the mixture is poured around metal rods or meshing, to give additional toughness, it is known as reinforced concrete. A concrete house is understood to be one whose walls throughout their thickness consist of concrete either reinforced or plain. In such houses it is usual to make the interior construction either wholly or in large measure of concrete, thereby rendering them fireproof. The terms stucco and plaster are in a measure interchangeable, each being a coating applied to some other substance as a backing, though it is usual to regard plaster as composed of sand, lime and hair, while stucco, since the advent of Portland cement, has been generally supposed to contain some measure of that ingredient. The old stuccoes were of various composition, but we



An example of moulded and colored cement panels set in a wall of pebble-dash that has been given a wash of thin cement. Oswald C. Hering, architect



Another treatment of a stone wall where the stonework cannot stand on its own merits is to give it a very thin coat of stucco. Duhring, Okie & Ziegler, architects



While we would not choose to employ parge work to such an elaborate extent as here, there are excellent opportunities for its use in belt courses and inset panels

are not now particularly concerned with them. When we speak of a stucco, or a stuccoed, house we mean that a coat of stucco has been applied to the outside walls on a back of concrete, stone, brick or wood. In the latter case metal lathing or wire mesh is usually fastened to the wood and the stucco applied to that. In some instances, instead of metal lath, boards are used for a backing, so grooved that the stucco may "key" into them and gain a hold.

As this series, however, is meant to be mainly suggestive, and has to do with the external appearances and the means by which desired effects may be secured, let us pass by matters pertaining to internal structure without further comment and go at once to the question of wall textures and other visible particulars.

It cannot be denied that many a concrete house and many a stucco house has an uncompromising, "plain Jane" aspect. They are severe and angular and raw-looking, and besides have a depressing hue. Naturally, one shies at them. Structural devices have been so far perfected by reinforcement and otherwise as to meet nearly every conceivable engineering requirement likely to arise. By skillful management, cost of construction has been placed upon a reasonable basis. But the bugbear of forbidding angularity, unrelieved by softening details, still confronts us. The failure of concrete construction in domestic architecture to win more general favor has so far been largely attributable to this shortcoming. "Plain Janeness" has blocked the way. If mouldings, lintels and belt courses are resorted to, the cost for special moulds at once soars, sometimes to an altogether prohibitive figure. In domestic concrete work the American public demands something that shall be practicable and reasonable in cost and at the same time meet esthetic requirements. This subject is much in the minds of architects. They are eager for a satisfactory solution and will hail with delight a workable combination of utility and artistic worth. Then, truly, concrete construction will increase by leaps and bounds. Some architects have reached happy solutions of the problems presented them, but they are the exceptions. We are indeed in the infancy of concrete architecture, and in stucco work we have scarcely dipped into the rich possibilities disclosed by the examples in the Old World. A great field of opportunities lies open before our architects, and we may trust their ingenuity to make the best and fullest use of them.

Several sorts of wall texture make possible a degree of variety in the appearance of concrete walls. There is the simple rough dressing after the forms have been removed, giving a surface that someone has facetiously called "a mere inexpressive expansive expanse of smooth smears." The "smooth smears," though, are susceptible of more variation than one might at first suppose, and by no means need be inexpressive. The patina of the wall, its skin, if you like so to call it, may be "roughed" or "pricked up" with a pointed tool made for that purpose. If the "smooth smeared" finish of a concrete wall is "pricked up," while still sufficiently "green," a regular pattern may be carried out. This plan has been resorted to in some old English plaster houses. The effect is good. Another method of treatment is to



A simpler form of parge work that is more applicable to American needs. The rough panels below the upper windows are pebble-dashed. Note the ornamental bands



An example of sgraffito work—the top coat of light plaster is scratched away in parts to show the darker color below

scour the wall so that the aggregate (the broken stone or gravel) may be exposed by the removal of all the superfluous small particles of cement. A good deal of variety can thus be gained. Then again, the wall may be "smooth-washed," or it may be "sand-floated," a finish that produces great uniformity of appearance though it sometimes gives the impression of sandpaper, or, last of all, it may be "pebble-dashed." Good pebble-dashing is highly desirable. The rough surface has great light-absorbent qualities and, in a bright climate, tones down the lines of the building and prevents the general effect of glaring hardness. Pebble-dash, too, offers an exceptionally good holding surface for any colored wash that it may be expedient to apply. One architect has achieved a particularly pleasing result with a pebble-dashed concrete wall by having the workmen go over the whole surface with whitewash brushes dipped in a wet mixture of cement and water. He has thus secured a beautiful, mellow gray.



The smooth cement base, belt course below the second-story windows, and the recessed panels below the arches, give the house its character. O. C. Hering, architect

There can be no doubt that modern architecture will undergo certain modifications because of the increasing use of reinforced concrete as a building material. Concrete architecture, we may be sure, will not follow the lines of stone or brick masonry, nor the lines of steel or wood structures, except where identical principles of construction compel it to do so. Utility and necessity will be the two chief determining factors of its future. Being cut off by considerations of cost from mouldings, string courses and other natural forms of ornamentation for the builder in stone, brick or wood, the concrete architect must perforce find some other means of expression, and compulsory simplicity will doubtless bring about a more serious study of the resources and requirements of artistic proportion and beauty of simple form and lines. In contemplating this impending change we should bear in mind that there are already certain well-developed styles of architecture that can most readily be translated into concrete and adapted to expression in that material. Some of the old Italian buildings furnish us with excellent examples in this respect.



The frieze protected by the deep overhang of the roof was secured by stenciling with cement washes in subdued colors. Louis Boynton, architect

While the architect of a concrete house is deprived of many devices of ornamentation by the limitations of his material, nevertheless some avenues of decoration are wide open to him. Countersunk panels he can use to advantage, while moulded panels, either plain or judiciously colored, make an agreeable and striking relief to the monotony of the wall. Colored tiles and mosaics, too, may be used in the bed of the wall. The prevailing neutral gray of concrete walls forms an excellent foil for colors, and it is to be hoped that our present foolish timidity about their use may soon be a thing of the past. Even where neither color nor moulded panels are used, plain countersunk panels, finished with a face different from the rest of the wall, afford a welcome diversity. Good results from the use of pillars, also, are always possible.



The Loggia degli Innocenti, Florence—the typical Italian architecture in which the use of stucco is particularly suitable



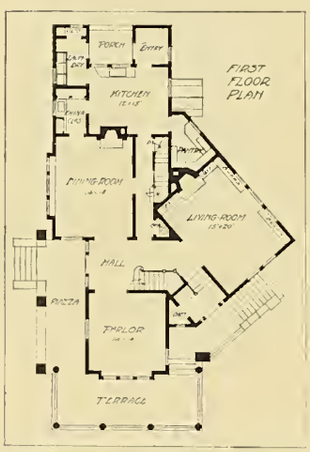
Another instance of the Englsh parge work where the detail, however, is rather heavy. Compare this with modern work at bottom of page 443

When we turn to stucco we find a bewildering number of ways in which it may be legitimately and effectively employed. In combination with timber, brick and stonework it is entirely satisfactory. It is when it is used as a complete outer coating over stone, brick or tile that the danger of aus-

(*Continued on page* 474)



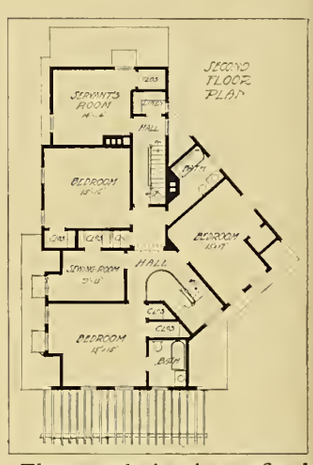
Owing to the peculiar features of the sloping site, Mr. Wadsworth's house is an interesting example of the irregular plan—something that is not often seen in houses of this moderate size



All the irregularity is taken up in the hall and pantry



It will be noticed that there are two main entrances, each of which leads into the hall



The angularity is confined to hall and bathroom



Even with its radical departure from conventional right-angledness, the hall, with its landing at the turn of the stairs, is by no means displeasing



Beyond the dining-room at the right lies the screened piazza, reached by a doorway that has replaced the window shown in the plan

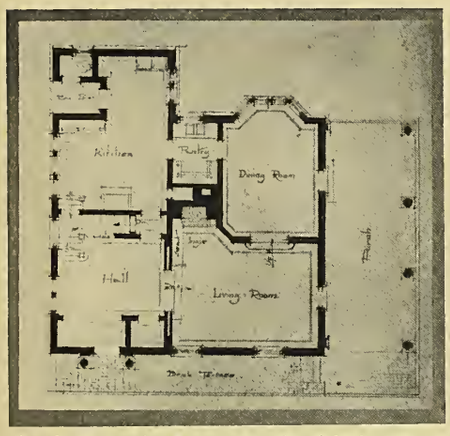
THE HOME OF MR. DEXTER E. WADSWORTH, QUINCY, MASS. *J. Sumner Fowler, architect*



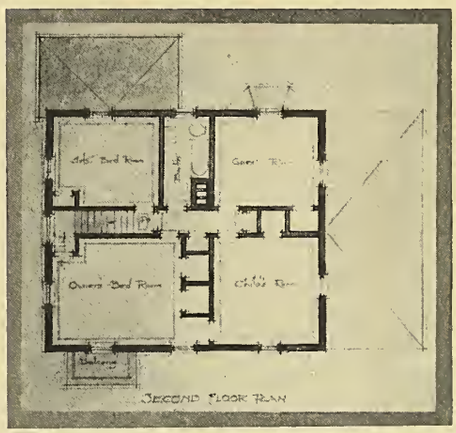
There is no question as to the desirability of stucco for the summer home among the trees. No other material for the walls seems so cool and inviting

THE HOME OF MR. EDWARD F. BEALE STRAFFORD PENNSYLVANIA

Mellor & Meigs
architects



A plan nearly square and with but one chimney—the most economical type



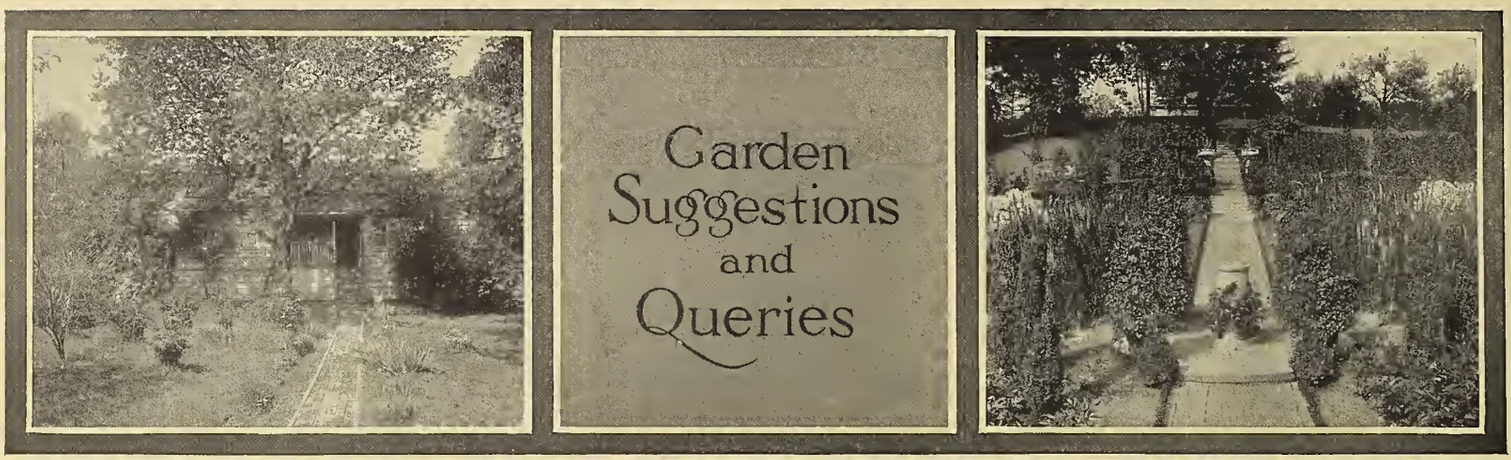
Waste space in the upper hall has been brought to the irreducible minimum



The recessed fire-corner, made necessary by the one chimney, rather adds to the living room's attractiveness



The door on the landing leads down into the kitchen—making one staircase serve the house



Conducted by
F. F. Rockwell

The Editor will be glad to answer subscriber's queries pertaining to individual problems connected with the garden and grounds. When a direct personal reply is desired please enclose a self-addressed stamped envelope

June

IT'S hard to stay and work in a hot and dusty garden these June days, when the white roads point away to wooded hills or the cool recesses of a vine-shaded veranda invite all one's spare hours. It seems time to pause in garden work: and it is—but not to loaf. It is time to pause and check up your work, and to take stock for late summer's and for winter's supply of vegetables.

In the Flower Garden

ATTENTION must be given to all the little seedlings that will be coming along from seed sown last month. Whether they are in the seed-bed or in their permanent places, they must not be allowed to get too big before thinning, and without thinning it will be impossible to get thick stocky plants, that will give satisfactory results when put in their permanent positions. Sorts that tend to run up into one straight stalk should be pinched back a third or a half when they are budded, to induce a branching growth.

Do not neglect to stake plants that are apt to become bent or "lodged" by wind and rain, especially when they are planted in exposed positions. Chestnut stakes, one-quarter to one inch in diameter, may be had cheaply of any local milling company, and cheaply cut in desired lengths, pointed and painted at home. Painted green or white, and used with raffia—either in its natural brown color or dyed green—they make neat, inconspicuous supports and by being stored under cover in winter will last many years.

Do not overlook the fact that it is just as necessary to maintain a soil mulch, by frequent cultivation, in the flower beds, and even around isolated plants, shrubs and vines, as it is to properly cultivate the vegetable garden. Light dressings of nitrate of soda, or of liquid manure, will often produce surprisingly good results.

Getting Plants from Left Overs

HAVE you any Begonias? If so, take some of the leaves and after making several inch cuts in them lay them on a box of coarse sand, dampened, and in the course of a few weeks you will have a new plant from each place of incision. This is mighty interesting and profitable work. Or have you any dracenas that have been doing poorly? Cut up the stem into several pieces and bury them in coarse sand that is kept damp, but never too soggy. Each piece will give you a new plant. Boston Fern also multiplies very rapidly. An old plant that is going back should not be doctored. One young plant is better than a dozen old ones. Separate the old plant and pot the divisions. Then during the summer plunge them out in the ground and see that the little runners that they throw off have a smooth piece of ground to spread on. From these runners dozens of new plants will spring up. This is the way to get new thrifty plants.

Are there any hydrangeas in the cellar? Take some cuttings and start them in sand. They will take hold without any trouble and later the small plants can be set out for the season and by fall will be worth looking at. This is a cheap way to get a stock of hydrangeas. There is no difficulty about it; it is just as simple as the directions I give.



It is not too late to plant bulbs of the gladiolus which will well repay your trouble

Do you admire the Boston Ivy? You can have all you want by taking cuttings and starting them in loam. They root easily.

Saved any cannas? If so separate them and either pot each piece or put them all in a shallow box with loam. If you haven't any and would like a beauty, buy a couple of clumps of King Humbert and separate them. One good sized clump will give you many plants, for each tiny piece will make a new plant. All that is necessary is to have an eye in the piece.

One thing you can do in the seedling line is to start some *Grevillia robusta*. The seed is very cheap and the methods of propagation are very simple. The plant is most beautiful and not used as generally as it should be. Start the seeds in shallow boxes and pot the seedlings when sufficiently large. The resulting plants will more than please you, for they grow very rapidly and the fern-like markings of the leaves make them seem almost fragile, but, on the contrary, they are really tough. They are to be recommended highly for a house plant and will weather conditions that the ordinary palm would go down under. I have had a couple in the house this winter and their keeping qualities certainly surprised me. They are most attractive. Take three or four small plants and put them in a large pot with a larger plant for a centre and you will have a stunning combination. There is no mystery about starting them. Just sow the seed as you do any other seed and results will speedily come. L. D.

Cultivation of the Gladiolus

IN cultivating the gladiolus the first consideration is to obtain fine varieties from the florists, or of your neighbor who makes a specialty of this popular flower. A study of reliable floral catalogues will help in the selection.

A friend of the writer is in love with this

culture, and plants, each year, three hundred of the choicest bulbs for her own private use. She did not purchase this amount to begin with, but she let them multiply, saving the corms each year, until now she has the above number of bulbs.

The gladiolus is not over particular about soil; a light, loamy, rich soil, and considerable moisture suits it well. Plant rather deep, from four to five inches; they are less liable to need support; but if the soil is heavy, not so deep. Set the bulbs two inches apart in the row, and the rows six inches apart.

The time of planting may vary with circumstances. If a succession of bloom is desired, plant the first as soon as the ground is in good condition, and not in danger of a hard frost—the plants withstand a light frost—a light covering will prove a safeguard, if caught by a severe frost.

With the first planting do not use the largest bulbs; keep them for the second or third planting, as the larger bulbs withstand the dry heat of summer better than the smaller ones. This succession of planting, with a two weeks' interval between, may be continued profitably as late as the middle of June, or even later, acording to some specialists, but the months of August and September being notably hot and dry, the later plantings are much more likely to be less luxuriant, unless moisture is plentifully supplied. With these later plantings it is not difficult to find places, as some early vegetable has been used, leaving vacancies which can be utilized in this way.

It is better to plant the gladiolus in beds, or groups, rather than in rows, as the plants help to sustain each other; but where they must be supported, tie to a stake carefully placed at the side of the bulb, or place stakes at intervals around the bed, and wind a strong cord around, which will keep the heavy stalks from falling outside the bed. Some prefer to nail strips of lath to the top of the stakes, and wind twine over the top both ways, forming a small square for the spikes to pass up through, which steadies them against the wind.

For bouquets cut the stalks when about half grown; they develop in water until the last bud is open. With this kind of cultivation the gladiolus will prove a joy through the summer. To continue it from year to year great care should be exercised in removing and storing the bulbs and little corms or bulblets for the increase of desirable varieties, remembering to give new locations for each year's planting, to avoid deterioration. At least one year should intervene between bulbs occupying the same ground.

Harvest the bulbs before severe frosts, keeping your varieties separate as much as possible; put in a cool, dry place for drying out and fuly maturing. Cut off the tops and store the bulbs in shallow boxes and baskets in a cool, dark cellar, being careful not to pile them much. Plant the little sets thickly in the spring, very much like sweet peas, and you will be rewarded the following year with much added bloom.

M. A. Nichols



Why not use part of this spring in propagating from your old plants? *Pandanus Veitchii* can be sprouted in damp sand



Leaves of *Begonia Rex* root easily if given several inch cuts and spread carefully on damp sandy earth



Leaf propagation is one of the most interesting of garden practices. Begonia leaf showing the roots starting from the incisions

In the Vegetable Garden

IT is time now either to plant or to start the last crops, and the tender ones which cannot safely be put in until settled warm weather has come to stay. These crops may be considered in three groups. (1) Vegetables to be started, such as cabbages, cauliflower, endive, kohl-rabi, lettuce, broccoli, Brussell's sprouts, kale and second transplanting of late celery. (2) Vegetables to be sown or planted, that should not with safety be put in during the first half of May—pole beans, lima beans, pole limas, eggplant, okra, peppers, melons, pumpkins and squash. (3) Succession or last plantings of early vegetables for fall and winter use—such as beet, carrot, corn, cucumber, tomato, kohl-rabi, lettuce, peas, radish and turnip.

Vegetables to be Started

AT this season of the year, when the ground is often dry as dust, and no rain may fall for weeks, more care will be needed to get seedlings of cabbage, lettuce, etc., started along than was required in early spring, when everything that can grow pushes up to the light. If empty coldframes are at hand, they will make a good place for starting such seeds. Put in several inches of clean fresh earth, run through a quarter-inch screen. If it is heavy, lighten by mixing with it a sufficient amount of leaf-mould and sand. If no coldframes are available, make a bed in a convenient place where it can be watched and watered if necessary. A bed four feet wide and ten feet long will give sufficient space for starting several hundred plants.

A day or two before you are ready to

(*Continued on page* 454)



A cutting from a rubber plant with the roots which it has developed within two weeks after planting



Inside the House

Timely Suggestions and Answers to Correspondents



The Editor will gladly answer queries pertaining to individual problems of interior decoration and furnishing. When an immediate reply is desired, please enclosed a self-addressed stamped envelope.

Rugs for Bungalows

AN excellent rug for use in the country house or bungalow is the Caledon Rug. This rug is made in Scotland, of wool, the dyes of which are sunproof. They cannot be absolutely guaranteed against continuous strong sunlight, but the effect, if a little fading does take place, is rather more desirable than otherwise, as it only softens the whole effect, blending one tone into another. However, they may be safely called "unfadeable," as the change, if any, is very slight, merely harmonizing the whole.

Another very desirable feature of the Caledon Rug is that it can be made to your own colors. It is sometimes difficult in carrying out the color scheme of a room to provide a floor covering that will harmonize with the other furnishing, but in the case of these rugs you can submit water color slips of the three main colors of your room, designating which is to be the body color, the color of the design, and the outline color. These must be judiciously arranged so that the main color will be soft and unobtrusive. If a brilliant color is used, have it for some small pattern of the design. A soft buff or tan is usually the best color for the outline and with the two intermediate tones made by the interweaving of the three principal colors, the effect will be of a five-color rug.

Caledon Rugs are made in various patterns, some with all-over designs and others with a plain background with a wide border for large rugs, or a narrow border, scarcely more than six inches, for small rugs. No rug is woven less than one yard wide, and these, made in any length, are for halls or bathrooms. The designs are running flower patterns or repeating patterns of conventionalized flowers in charming art nouveau designs.

These rugs are particularly appropriate for a summer cottage or bungalow. The weave is close and firm, so the rugs are a good weight and are very easy to keep clean, a sweeping with the carpet-sweeper every day maintains them in excellent condition. The permanence of the colors is a very desirable quality for the rug that is exposed to much sunshine, as all furnishings of a summer house are very likely to be.



A rug which can be woven to order for you in colors and designs to match the rest of the furnishings. This border matches the freize on the wall paper

One would imagine that a made-to-order rug would be very expensive, but these wool rugs are cheap enough. The price is reckoned at $4.00 a square yard for the lighter weight, or $6.50 a square yard for a very heavy weave. This makes the lighter weight rug, which measures 9 x 9, cost $36.00, or $48.00 for a 9 x 12 rug—and so on. The lighter weight rug is usually preferred. The Caledon rug can be woven almost any size. There are a few sizes for which looms have not been provided, but many more than the regular stock sizes are to be had in these made-to-order rugs.

Perhaps the very best feature of all is that the rug made to your order and color scheme is not to be seen in every store or other homes. You have something distinctive, and the stranger on entering your home knows that you have given time and thought and personal attention to the furnishing of your house.

There are more expensive and more elegant rugs which may be made to your own design as well as color scheme. A very heavy hand-tufted rug made in Ireland is called the Donegal and costs from $15.00 to almost $100.00 a square yard. A little less expensive rug which may be made to order in color and design is a Scotch axminster, which costs from about $12.00 to $50.00 a square yard.

A Spring Cleaning Suggestion

HOW many times do we hear, "Oh, I wonder what I can do for this stubborn drawer"? It may be either in the bureau or the buffet, or the desk or in the kitchen cabinet, yet the person who makes the impatient exclamation is generally the one who forgets in the next minute



A plate of the unbreakable Swedish ware so serviceable for the rougher usage of the summer cottage

A most attractive plate with a Dresden pattern, inexpensive yet dainty and delicately colored

only to make the same comment on the very next occasion the self-same drawer has to be opened. A little of the common yellow soap rubbed along the grooves on which the drawer slides and on the edges of the drawer itself would eliminate the trouble.

China for Summer Cottages

OF all the china especially designed for the tables of summer cottages and bungalows none is prettier or more serviceable than the Swedish ware, which is said to be as nearly unbreakable as it is possible for china to be. It is noticeably light in weight, but quite tough, owing to the large amount of bone used in making it, and the decorations are in pale yellows and pinks and greens, just the colors for summer use. As it is an open-stock china, sold by the piece and not by the set, any quantity may be had, and pieces that are broken can readily be replaced.

Another style that is dainty and promises to be popular is patterned after the familiar Dresden china, and, while inexpensive, does not look cheap, as so many imitations do. It shows tiny flowers in the most delicate of colorings placed singly on a plain white ground, with sometimes a thin line of gold around the edge of the plate. Most of the new china shown this season is in fact distinctly simple in decoration and dainty in color, as opposed to the large figures in rather gaudy reds and blues that decorated the cottage ware of a few seasons ago.

The plain white china ornamented with a gold rim, which is much used and always suitable, may be had in various qualities and at prices to correspond. There are of course some people who prefer to keep to a standard pattern in white and gold or blue and white for summer use, but somehow a design of flowers with just a bit of color seems rather more attractive for the season of recreation and outdoor pleasures.

By way of novelty for the blue and white enthusiasts the well-known pat-



The upper picture shows a beautiful Adam design in green; below is a tasteful nasturtium motif in yellow, brown and green

terns that have been used for generations are reproduced with additional decorations of gold. One of the more expensive sets shows the familiar willow pattern; lovers, doves, irate father, bridge and all, in a rather deep blue intermingled with an elaborate design done in gold, producing an effect that is decidedly rich. The idea is not confined to the more expensive china, however, for many of the cheaper sets in blue and white are ornamented with just a touch of gold to bring out the blue.

A moderate-priced ware that seems particularly suited to summer use on account of its durability as well as the fitness of its decorations is the yellowish china with a design in a flat stenciled effect. Heretofore the pattern has been one of poppies in plain green or a combination of green and red, but a nasturtium design, new this season, is even more satisfactory than the poppies. The nasturtiums, yellow with brown centers, are wonderfully natural-looking, and with the green leaves on a cream ground they make one of the most desirable patterns, either for the small bungalow or the country house.

One of the newest patterns has a particularly cool and summer-like appearance, owing to the several shades of green that are cleverly work into the decoration. The irregularly-shaped edges are outlined in dark green, while a design composed of medallions and festoons of the tiniest leaves in lighter greens ornaments the rims of the plates and the sides of the other pieces.

Practically all of this china for summer use is to be had in any desired quantity as well as by the set, and much of it is inexpensive. A set of one hundred pieces of an exceedingly attractive design may be had for $25 or $24.75 to be exact, and from that figure the prices go up to $100 and over.

The Finest Furniture Polish

ACCORDING to the best cabinet-maker in our city, the best possible furniture or piano polish is composed of equal parts of sewing-machine oil and vinegar. It will remove white marks caused by heat and dampness, and both cleans and polishes the wood.

A friend of mine keeps her piano like new by wiping it with a chamois skin wrung out of cold water, doing but little at a time, and drying immediately with a soft cloth. This is good, but the oil and vinegar does more than cleanse.

Protection for Wall Paper

I HAD often wanted to rearrange the pictures in the various rooms of my house, but owing to the unfaded and especially bright condition of the paper underneath them I was obliged to let them remain in their usual positions.

This spring I have had my rooms done with fresh paper, and while the paper-hangers were at the house they told me that if I would put a push-pin in the wall at each corner of the lower edge where the picture rested on the paper, I would overcome this unsightly condition of the paper underneath. The glass-headed push-pins cause the picture to remain out a little way from the wall, allowing the air to circulate all around it, thus keeping the condition of the paper even.

Ingenious Devices

LABOR-SAVING SCHEMES AND SHORT CUTS IN THE HOUSE AND IN THE GARDEN

When the Drain is Clogged

TO remove the obstruction from the clogged-up drain pipe of a sink, first dissolve in one-half gallon of boiling water a sufficient quantity of any good soap powder to make a strong suds. Pour the solution into the drain pipe, and open the faucet, then while the water is running place the palm of the hand over the mouth of the pipe and pump up and down in such manner as to cause suction though the pipe. The obstructions will usually soon be removed. J. J. O'C.

How to Take Up Flooring in the House

WHENEVER it is necessary to take up a section of flooring for any purpose, whether it be to lay steam or hot water heating pipes, or gas or electric light wires, the careful housewife is in despair for the safety of her floors, especially, as is often the case, they are of fine wood, carefully stained and polished. Few workmen understand the art of doing this. The following hints were gleaned from the experience of having some work of this kind done about the house.

One method is simply to destroy lengths of flooring, using new materials to cover the opening. This method will be found very expensive in the end. It will require an endless amount of an expert painter's time to darken the new material to match the old. It is, however, the common method of doing the work.

A far better plan is the following, which takes but little time. Briefly the idea is to *cut* the *tongues* from two strips of flooring laid side by side, which will allow them to be removed without any injury. If done in the following manner, when it is relaid, no injury is noticeable. A very fine chisel, about one-half inch wide, is inserted between the strips of flooring at their ends and driven down with a hammer until the tongue is cut through. Then a "key hole saw" is used, and the tongue cut as far as the first beam. The saw is held at quite an angle when cutting the tongue. It is necessary of course to use the chisel again on the side of each beam opposite the saw. When the tongue has been cut as far as necessary on one strip, that on the strip next to it is also cut. Then at the ends of both the strips the chisel is driven through at an angle and the saw inserted and both pieces cut.

It is obvious that when they are laid in place again, and nailed, and a little varnish of the right color applied, that where they have been taken up is scarcely noticeable. I have discovered some very poor work where other methods were employed. To start the hole for the saw to be inserted a bit and brace was used to bore a hole! In another house, after the strips had been removed, another *wide* strip was put down instead, of course spoiling the appearance of the floor. With the method above described I have known fine flooring to be removed, and after it was replaced it was difficult to locate the spot, unless a person knew exactly where to look. So many old houses are being wired for electricity that this method is very valuable. C. K. F.

A Picture Frame Suggestion

MANY old-fashioned picture-frames are spoiled by over-decoration; either too great width or a combination of wood and gilt carving. Where the outer rim of gilding may be removed, leaving a simple frame of wood, the change makes all the difference between vulgarity and good taste. Often a few strokes of a hammer or the use of a screwdriver will accomplish such amputation with gratifying results. M. E. S. H.



A clever method of tree doctoring accomplished by hammering lead sheathing over the cut limb

A Camp Cupboard

SOME fellow-campers filled me with envy at sight of their two fine cupboards. These proved to be simply boxes with one side made into a door and attached with leather hinges. Inside, cleats were nailed across to accommodate the light, removable shelves.

For the trips to and from camp, these were merely packing boxes, the shelves being slipped all together into one side. After the stores and bedding were removed, they were "set up," and were the greatest convenience the camp contained. Leather handles made them easy to lift when full. The boxes were painted neatly.

Camps and rented cottages seldom have adequate cupboard room, while this also disposes of the packing boxes which are often a burden in limited space. A. M. A.

Starting Rose Cuttings

A LADY unusually successful in starting rose slips gives this as her "secret":

She takes each little cutting, after it has stood a few hours in water to freshen its stem, and makes a ball of clay around the end or joint where the roots will start. This ball she forms with her hands, pressing it as hard as possible, and making it somewhat larger than a baseball. This she plants in the earth just as though it were a bunch of roots. In this way she seldom loses a cutting, and finds she can grow the most delicate varieties. L. M. C.

Protection from Sun

AFTER having suffered a slight sunstroke, I find it impossible to go into the garden for even a short time without protection. For a very small sum we purchased one of the large umbrellas used for advertising purposes, and my husband wired the handle securely to a stout stick sharpened at the end. Now, when desiring to pick a few berries or vegetables I plant my umbrella, and work beneath its shade without discomfort or fear of injury. This would prove an excellent thing for children who have no shade in which to play. A. M. A.

Tree Doctoring.

PROBABLY there is no country where there is such a universal interest in gardening as in England. Almost everyone has his garden plot, from the few square feet of the cottager to the wide acres of the landed proprietor. Consequently nearly everyone is proficient in the art, and considerable ingenuity is shown, especially in the trimming of vines and hedges and pruning of trees. The accompanying illustration shows a tree wound and a successful means of doctoring it, practised by an English gardener. Because of the exposed position where the branch was sawed off, something more permanent than a liquid coating was sought for, and a sheet of lead sheathing used. By simply bending this over the amputated branch and hammering with a fairly broad-faced hammer, a hermetical casing of great durability was formed. This was sufficient to prevent decay and allow the natural growth of the tree to proceed unhindered. A. W. D.

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Garden Suggestions and Querries

(*Continued from page* 449)

sow the seed, give the bed a thorough soaking, if the soil is dry. Then, when it has dried out to the proper condition (so that it will not be at all sticky or lumpy when you work it), make the drills six inches apart and a quarter to a half inch deep, according to the seeds to be sown. Sow the seed *thinly*. If the ground has been made properly moist, and the seed is good, almost everyone will germinate; and it is better not to have to thin out very much, as the plants remaining are likely to be injured. Five or six seeds to the inch will be enough, if the seed is fresh and strong.

If the weather is very hot and dry it may be necessary to shade the seed-bed until the seedlings break ground. With very fine seed, and with lettuce and celery, the shading is very important. In old cold-frames it is easily given by supporting the sash, a foot or more above the frames, and spraying or sprinkling with a solution of plaster, lime or clay, and water, to make the glass opaque (or light frames, 3ft. x 6, covered with protecting cloth, are still better. These may be made at a total expense of twenty-five to forty cents, and are useful in many ways).

As the plants grow tall, cut back one-half of the leaves, thus inducing a thick, stocky growth. Keep the bed clean and the surface loose at all times and the day before transplanting, if the soil is dry, give the plants a copious soaking.

THE HEAT LOVERS

Nothing is gained by attempting to start the pole-beans before warm weather comes, but everything should be ready when it does come to give them a quick start and rapid growth. To this end special hills are prepared, by digging out the soil and incorporating old, fine manure. If the sod is heavy, add leaf mould or sand. Sow ten or fifteen beans in a circle, marking a place for the pole—if it is not already in place—and cover not more than two inches deep. When well up, thin out to two or three plants, and watch for the first "runners" which may need to be started up the poles. In sowing limas, try to select a time after rain and when it does not seem likely that one will occur for several days more. Plant with the eye down, and if the soil is at all wet or heavy, cover in the drill with sand, or the light soil from some other place. Okra seed rots very quickly in damp soil. Sow several seeds in a place, making the hills about two feet apart, and thin out to the best plant when well up.

Special preparation of hills for melons and squashes was described in the May HOUSE & GARDEN. In growing the vine vegetables the best way to fight the various bugs which are the special enemies of these plants, is to use bottomless boxes eighteen to twenty-four inches square, and eight inches deep, covered with mosquito wire netting, or protecting cloth. For further information about fighting these and other plant pests read the article on page 424 of this magazine.

For peppers, and especially for egg-plants, the ground cannot be made too rich. They should be put firmly in specially prepared hills, and, unless the ground is very rich, enriched with liquid manure, hen-manure, guano or cottonseed meal. It will be well, if possible, to keep them within reach of the hose, as the egg-plants especially will need plenty of moisture to mature large fruit. Most persons still have the idea that peppers are just as hot as they sound, but the new large mild varieties, such as Ruby King and Chinese Giant, are, when well grown, so thick and mild that they can be sliced and eaten like cucumbers or tomatoes. To those who are not yet familiar with their merits, they will prove a revelation.

In growing egg-plants the worst enemy is the potato bug. Use arsenate of lead and other remedies suggested on page 425.

SUCCESSION AND LATE CROPS

In sowing succession and winter crops, by seed, be exceedingly careful in hot weather to make the seeds firm in the soil. After sowing, press down into the furrows or drills with the edge of a board or the sole of the foot, before covering. If using a seed drill, sow from half again to twice as deep as in spring.

Beets may be sown until August. Give a good rich soil and sow two inches deep in rows fifteen to eighteen inches apart. Carrots, to be on the safe side, should be in by June 15, and for the first few weeks great care must be taken not to let the weeds, which grow very quickly in the hot June and July days, get a start and smother them out. In the first stages of growth the plants are very small and weak, but once they get a good start, if ordinarily good culture is given, there will be no danger from weeds. The soil should be deep, and finely worked, so that the roots will make a smooth, even growth.

Sweet corn may be sown, if the early varieties are used, as late as July 4 and still mature good ears in weather at all favorable. Kohlrabi and lettuce are often sown where they are to be grown. Firming in the soil is of the utmost importance in getting a good stand.

Late plantings of peas should be made two to three inches deep, in the coolest soil, with the most moisture, available. For succession plantings the wrinkled sorts, although they require bushing, will give by far the most satisfaction, as they are a hundred per cent. better in quality. Boston Unrivaled (an improved strain of Telephone) is one of the best.

Select a few of the most forward of your tomato plants and try to get the tomatoes ahead of anything your neighbors will have. Give a top dressing of nitrate of soda early in June, and one of muriate of potash or of ashes toward the end of the month. Keep all suckers pinched off, and after half a dozen bunches have formed, cut back the top. Train to stakes or trellis, of course, and when the fruit is half developed, pinch out large leaves that shade it too much. Paper bags tied over the bunches will insure fine surfaced



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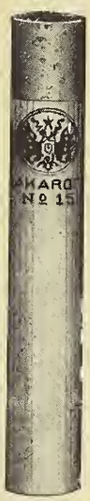
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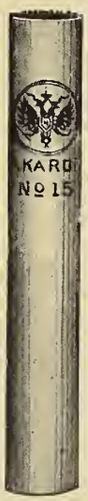
The usual way of putting a new cigaret on the market is simply to put the same old cigaret into a new box, and *whoop 'er up!* A big selling organization and big advertising are brought to bear and *big sales are the result.* When the novelty of the *new label* wears off and the public is ready for a change, *the process is repeated*—and the patient public goes on *smoking advertising*—not cigarets.

For fifteen years the public has been *stampeded* from one cigaret to another in just this way, and about the only change it ever gets is from a red box to a blue one and back again—with an occasional dash of brown. In short, the average cigaret is not a *smoking* proposition, but a *selling* proposition.

The Makaroff business is different. I started the manufacture of



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because that was the only way I could be sure of getting *the kind* of cigarets I wanted. It has grown because there are a lot of other folks who want *that kind* of a cigaret. And the number grows just as fast as people find out *what kind* of a cigaret Makaroff is.

Just let this fact sink into your consciousness and stay there—*this business is* and *always will be* operated to make *a certain kind* of cigarets—not merely to do a certain *amount* of business. I always have believed that if we produced the quality, the public would produce the sales. And that faith has been justified. Makaroffs are really different from other cigarets—and the difference is all in your favor.

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fruit, and slightly hasten its ripening.

Remember that the success of spraying must depend entirely upon the *thoroughness* with which it is done; and that the second and third applications are in many cases just as important as the first. Look up your spraying table, and attend to what requires attention now, if you would have abundance of firm beautiful fruit in the fall and winter.

Keep a sharp eye in the currant bushes; if the currant worms are not checked at the start, it will take them only a few days to work havoc; and in the case of the currant, the good foliage is doubly necessary because it shades the soil about the roots and helps maintain the moisture and coolness so essential to a good crop of this useful fruit.. In general, throughout June daily watchfulness is very important in every part of the garden.

A Botanist's Vacation

(*Continued from page* 423)

I have found only once in the woods in July; the great green orchid, which was best of all; and last, several varieties of ladies' tresses, a field full as far as the eye could see, with the busy September bees doing their work of cross-fertilization from flower to flower beneath your eyes. They completed my orchid calendar.

So much for the vacation in the field and woods. It was no less a busy one at home. Out-of-doors on a shady porch all the work of analyzing was to be finished with the use of a large microscope, and here the camera found another use. It made records of the parts of flowers with unswerving truthfulness, showing the pollen on a lily petal spilled by a large-winged butterfly a minute before. All the little obtruding parts of the petal that protect the nectar troughs are shown in a photograph better than they could be drawn, so, if you want to teach botany, or know botany, you should take photographs of the flowers close by. The photographs will show you many things you overlooked when you studied the blossom at first hand.

The hollyhock shows the crinkled texture of the petals as they have just unfolded from the bud. The pistil is covered with pollen that is spilling and falling.

The bunch of catalpa blossoms, laid on a leaf and photographed, shows plainly its relation to the trumpet vine. This gives an idea of what can be done with larger flowers in the studio.

It is all work, and it is all play, and that is what makes it a vacation.

Modern Warfare on Garden Pests

(*Continued from page* 425)

parasitical disease. Lime, applied heavily to both soil and seedbed, is the only thing so far as found to prevent its appearance in infested ground, unless a two or three years' rest can be given. It is preferably applied in the fall, but if special agricultural lime is used, may be put on in the spring. The only assistance for crops in-

fested is to help them through by giving a dressing of nitrate of soda, guano or other quick-acting fertilizer, and high piling with moist earth, thus giving a new stimulation and encouraging the formation of new roots. While this does not in any way cure the disease, it helps the crop to withstand its attack. When planning where to put cabbages or similar crops next year, be sure to use a system of rotation and to set plants grown in clean soil.

CUCUMBER-BEETLE. Often the little cucumbers barely get above ground when the small black-and-yellow-striped cucumber-beetle attacks them. At other times he does not appear until after they are well advanced and apparently beyond injury. That is the time to beware! There will be a swarm of beetles and seriously injured vines before you realize what the matter is. The easiest and surest way to fight this fellow is to keep him away from your plants altogether by means of a screened box. If the beetles are in evidence when the vines get so large as to make it necessary to remove the boxes, keep them sprayed with Bordeaux mixture. Plaster, or fine ashes, kept sifted on the leaves, is also used, but this protects only the tops of the leaves.

CUCUMBER-WILT. This condition of the vines often accompanies the presence of the cucumber-beetles, and formerly was supposed to be the direct effect of their work. It is now supposed to be a disease, spread by the striped-beetle. The only remedy is to get rid of the beetles as quickly and thoroughly as possible and to collect and burn every wilted leaf or plant.

CUCUMBER-BLIGHT. This is a mildew which attacks both cucumbers and melons, the leaves turning yellow, dying in spots and finally drying up altogether. Upon the first appearance of the mildew, or where there is reason to fear an attack, spray with Bordeaux every ten days.

CUTWORM. No garden pest is more exasperating than the fat, brown, clumsy-looking cutworm. He works at night, attacks the strongest, healthiest plants and cuts them off near the ground, very rarely eating or carrying away any of the severed leaves or fruit—although occasionally I have found such bits, especially small onion tops, dragged off and sometimes buried in the soil. In small gardens the most effective remedy is hand-picking. As the worms work at night, they are readily found by lantern light or very early in the morning. In the daytime, by digging about in the soil at the roots of an injured plant, a careful search will almost invariably reveal the culprit. In connection with hand-picking, where there is reason to fear the cutworm's attacks, it is decidedly advisable to use a poisoned bait. This is made by mixing wheat bran with water into a mash, adding to the water before mixing, Paris green (powder) or arsenate of lead. This supper is distributed toward nightfall in small amounts—about a teaspoonful to a place—along the rows or near each plant, just as they are coming up, or after setting out. Another method, sometimes used

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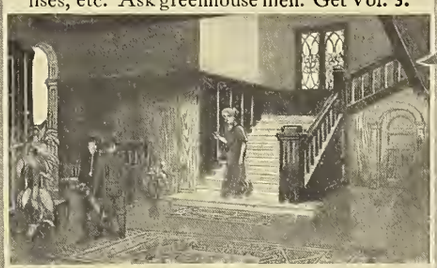
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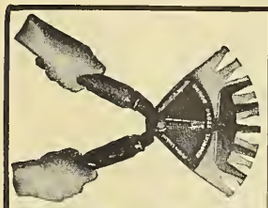
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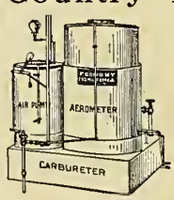
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where only a dozen or so plants are set, is to protect each by a collar of tin or tar-paper sunk an inch or two into the soil and several inches high.

FLEA-BEETLE. This hard-shelled, far-hopping mite attacks potato vines and young cabbage, radish and turnip plants. The damage done is generally much under-estimated, as the insects are so inconspicuous. Thorough spraying with Bordeaux or kerosene emulsion will hold them in check.

POTATO-BEETLE. This old reliable, sure-enough plague is almost certain to be encountered every season. He invariably finds the potato patch, or a few egg-plants, no matter how isolated they may be. The standard remedy for years has been Paris green, sprayed or put on dry with a modern gun. Arsenate of lead is now largely used in place of Paris green. It has the double advantage of staying on much longer and of never burning the leaves. On a few rows, hand-picking of the old bugs and destruction of eggs, which are laid on the under side of the leaves, is quick and sure.

POTATO-BLIGHT. There are two forms of the potato-blight, early and late. Both are prevented by Bordeaux, 5-5-50, sprayed every two weeks. Remember to spray before the blight appears, as it is almost impossible to combat it successfully afterward. Begin the spraying early, when plants are about six inches high.

POTATO-SCAB. This is a sort of skin ring-disease affecting the maturing tubers, sometimes so seriously as to render them useless for market. If the trouble is in the soil, it should be given several season' rest from potatoes. If with the seed, soak in solution prepared as directed under No. 10, which see. Be careful not to use any boxes, bags or baskets for the treated seed that have been in contact with scabby potatoes.

ROOT-MAGGOT. This insidious pest, a small white grub, often works havoc among cabbages, cauliflowers, radishes, turnips and onions. His presence is indicated by the wilting down of the tops during the heat of noontide. *Destroy every infested plant at once,* being sure to get the grubs up with the roots. The remaining plants should be treated with a half-pint of strong caustic lime water, or a solution of muriate of potash, poured about the root of each plant, first removing an inch or so of earth. Carbolic acid solution is used in the same way; the most effective method of all, however, is to make a small hole with the dibber, and into it drop a small teaspoonful of bisulphite of carbon, covering at once. As the root maggot is first hatched above ground, pieces of tar-paper, several inches in diameter and slit from one side to the middle so as to fit tightly about the plant's stem, are sometimes used. Frequent liming of the soil, and constant rotation, are the best means of prevention. Extra stimulation of the plants, as directed for club-root, will help carry the plants through.

ROSE-BUG. These unsightly gray "chaf-

ers" frequently come in swarms and strip everything clean. They prefer roses or grape vines, but destroy many other things as well. For a few vines or plants, hand-picking will serve. Arsenate of lead is the most effective spray.

SQUASH-BUG. Anyone who has ever attempted to grow squash or pumpkins is familiar with the large, flat, black "stink-bug," so destructive of all running vines. Protection with frames and hand-picking are the best garden remedies. Trap-vines of early squash, as used for the borer, are used, or the old bugs, before the hatching season, may be trapped under old boards. The small, newly hatched bugs, or sap-sucking "nymphs," are the ones that do the damage. Tobacco dust or kerosene emulsion, heavily applied, will kill them.

TOMATO-WORM. This is a large green-horned caterpillar, very piggish and somewhat irritable. Hand-picking, or destroying the beautiful night-flying moth which lays the eggs, is the only way to combat it.

WHITE-FLY. This troublesome indoor pest fortunately does not molest us much in the open, but occasionally injures flowering plants and tomato and running vines. The young flies, which do the damage, are scale-like insects, found only on the under side of the leaves. Spray thoroughly with kerosene emulsion or whale-oil soap.

WHITE GRUB. The white grub, or muck-worm, is the larva of the common June-bug. It chews the roots of grasses and plants. When lawns are infested, the sod must be taken up, the grubs destroyed and new sod made. When the roots of single plants are attacked, dig out, destroy the grub and reset the plants if not too seriously injured.

The various remedies mentioned above may all be readily prepared at home, as follows:

MECHANICAL REMEDIES

1. Covered protecting-boxes are made of half-inch stuff, about eight inches high and eighteen to twenty-four inches square. They are covered with mosquito netting, wire or "protecting-cloth"—the latter having the extra advantage of holding warmth over night.

2. Collars are made of old cans with the bottoms removed, cardboard or tarred paper, large enough to go over the plant and an inch or so into the ground.

3. Cards are cut and fitted close around the stem and for an inch or so upon the ground around it, to prevent maggots going down the stem to the root. Not much used.

DESTRUCTIVE REMEDIES

4. Hand-picking is usually very effective, and if performed as follows, not very disagreeable: Fasten a small tin can securely to a wooden handle and fill one-third full of water and kerosene; make a small wooden paddle, with one straight edge and a rather sharp point; by using this in the right hand and the pan in the left, the bugs may be quickly knocked off. Be sure to destroy all eggs when hand-picking is employed.

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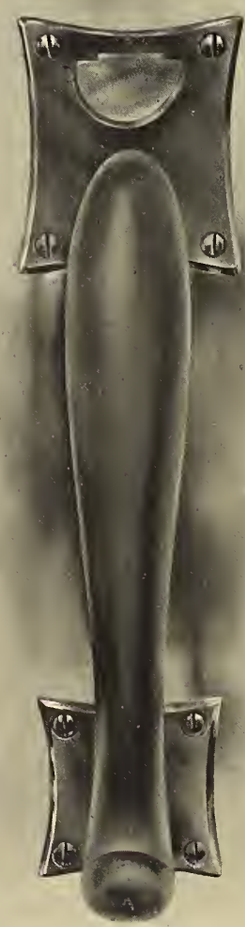
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5. Kerosene emulsion is used in varying strengths. It is prepared as follows: Dissolve one-half pound soap in one gallon of hot water, and (away from the stove, please!) add two gallons of kerosene. Churn or pump for five or ten minutes, until of the consistency of thin cream, so that the oil does not separate on cooling. This is the stock. When using, dilute with ten to fifteen parts of clean water.

6. *Whale-Oil Soap.*—Dissolve one pound of soap in one gallon of hot water, and when using add four to six parts of water. (Ordinary soap will answer the purpose, if necessary.)

7. *Miscible Oils.*—They are advertised under several brands, for use against scale insects. They mix with cold water; used only on dormant plants and trees.

8. *Tobacco Dust.*—This article varies greatly. Most sorts are next to worthless, but a few of the brands especially prepared for this work (and sold usually at $3 per hundred pounds, which will last two ordinary home gardens a whole season) are very convenient to use, and effective. Apply with a duster, like that described later.

9. *Carbolic Acid Emulsion.*—One pint crude acid, 1 lb. soap and 1 gal. water. Dissolve the soap in hot water, and balance of water and pump into an emulsion, as described for kerosene emulsion.

10. Corrosive sublimate is used to destroy scab on potatoes for seed by dissolving 1 oz. in 7 gals. of water. The same result is obtained by soaking for thirty minutes in a solution of commercial formalin, at the rate of 1 gill to 15 gals. of water.

11. *Bordeaux Mixture.*—This can be bought ready mixed in liquid or powder form, or may be made as follows: Take copper sulphate 5 lbs., unslacked lime 5 lbs., water 50 gals. Prepare several hours before required, as follows: (a) Dissolve the copper sulphate in 5 gals. water, suspending the crystals in a piece of bag just below the surface. (b) Slake the lime in hot water, adding the latter slowly, to do the work thoroughly. Add sufficient water to make five gallons. (c) When ready to use, dilute the stock sulphate solution (a) with water in the proportion of 5 to 50. Add the stock lime solution (b) in equal amount to the sulphate solution.

To test the mixture, after making, get at a drug store a pint bottle, with a quilled cork, in which have dissolved 1 oz. of yellow prussiate of potash. When this is dropped into the Bordeaux mixture, it should *not* turn brown. If it does, add more lime water.

POISONOUS REMEDIES

12. *Paris Green.*—This is the standard remedy for eating-bugs and worms. With a modern dusting machine it can be put on dry, early in the morning when the dew is still on. Sometimes it is mixed with plaster. For tender plants easily burned by the pure powder, and where dusting is not convenient, it is mixed with water at the rate of 1 lb. to 50 to 100 gals, and used as

a spray. In mixing, make a paste of equal quantities of the powder and quick-lime, and then mix thoroughly in the water. It must be kept stirred up when using.

13. *Arsenate of Lead.*—This has two advantages over Paris green: it will not burn the foliage and it will stay on several times as long. Use from 4 to 10 lbs. in 100 gals. of water; mix well and strain before putting in sprayer.

14. *Hellebore.*—A dry white powder, used in place of Nos. 12 or 13 on vegetables or fruit that is soon to be eaten. For dusting, use 1 lb. hellebore to 5 of plaster or flour. For watering or spraying, use at rate of 1 lb. to 12 gals. water.

APPLYING POWDERS AND SPRAYS

There are a few of the modern engines of destruction which every gardener should have. If for the present but one can be purchased, I would advise an automatic air-tank sprayer, such as illustrated on page 425. Almost all the powder poisons can be applied when held in solution in liquid, so the spray pump will do for both liquid and powders, if necessary. It will pay, however, especially in a garden of some size, to have a powder duster as well. The simplest forms of these are merely cannisters with perforated bottoms, from which the powder, usually mixed with plaster or fine ashes, is sifted upon the leaves of low-growing plants. A much better form, however, is the powder gun, which by a forced current of air blows the powder on in a fine, almost invisible cloud. By this method pure poisons can be used and a very large area gone over in a short time.

For the work in the orchard, the compressed-air sprayers are furnished with extension rods, to reach the upper portions of trees. There are also different styles of nozzles for various special purposes, such as reaching the under side of leaves, which may gradually be added to one's collection. By giving careful treatment, all these tools will last for years, so that in the long run the expense is very little.

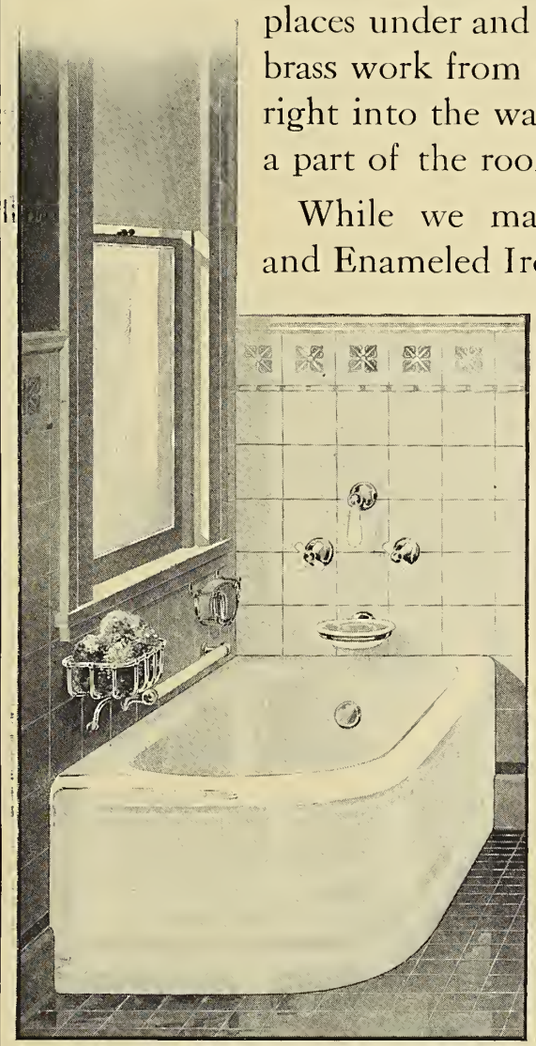
THE PRICE OF PEACE

These things we can do in actual hand-to-hand, or rather hand-to-mouth, conflict with the garden's enemies. But the sad fact remains that for plants once badly infested, particularly if covering any great area, very few remedies are satisfactorily successful. Nowhere are the old adages of "eternal vigilance" and "a stitch in time" more applicable than in fighting garden pests. Instead of relying upon remedies it will be far better, far easier and far more effective to use the following precautions against ravages by plant pests.

First: aim to have soil, food and plants that will produce a rapid, robust growth without check. Such plants are seldom attacked by any plant disease, and the foliage does not seem to be so tempting to eating-insects; besides which, of course, the plants are much better able to withstand their attack if they do come. Second: give clean, frequent culture and keep the soil busy. Do not have old weeds and refuse

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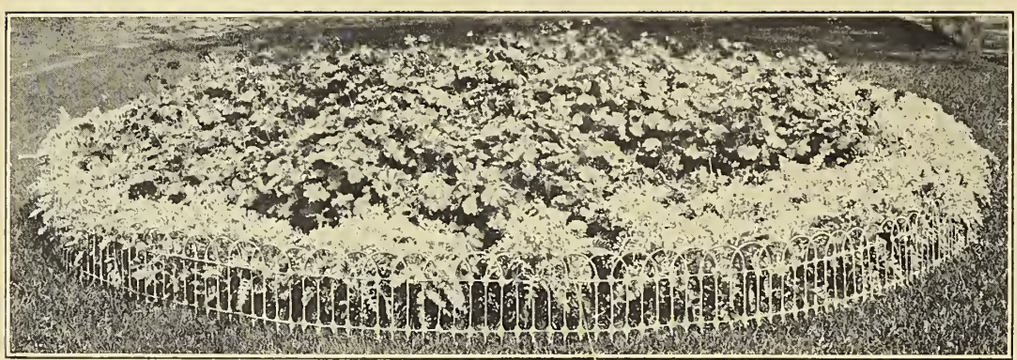
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lying around to shelter insects and eggs. Burn all leaves, stems and other refuse from plants that have been diseased. Do not let the ground lie idle, but by continuous cropping keep the bugs, caterpillars and eggs constantly rooted out and exposed to their natural enemies. Third: practise crop rotation. This is of special importance where any root disease is developed. Fourth: watch closely and constantly for the first appearance of trouble. Do not wait to see what will happen. And last, and of extreme importance, be prepared to act at once. Do not give the enemy an hour's rest after his presence is discovered. In almost every case it is only by having time to multiply that the pest will do great damage.

If you will keep on hand, ready for instant use, a good hand-sprayer and a modern powder gun, and a few covered boxes, tobacco dust, arsenate of lead and materials for kerosene emulsion and Bordeaux mixture, you can cope with all pests.

On Transplanting

A PRACTICE that has brought me successful results when transplanting is not to apply fertilizer to seedlings until growth has started. My plan is to set the young plant only in the clean natural soil of the bed. Afterward, when the recovery from the shock of transplanting is complete and the new growth has begun, stir in the fertilizer; of course the bed has been well worked beforehand and the heavy winter application of manure has been thoroughly incorporated with the soil. High grade commercial fertilizer, however, must be given only to a growing plant. When the young plant is taken from the protection of the moist seed-bed and placed in the open ground it faces an important crisis. The tiny roots have been torn from their native soil and have to adapt themselves to the new food supply. The leaves are exposed to far greater evaporation from the sun and the whole plant is forced to meet an increased demand upon its resources at the very time of its lessened vitality. The growth must not be checked too long or the plant may never recover. All depends now upon the treatment. To begin with the tender roots want nothing but the natural soil made very fine and pressed gently but firmly about them and this soil well moistened. A light mulch of leaf mold will keep the moisture in. Next it will require protection from the direct rays of the sun. A plant so treated will almost certainly recover in a day or two and begin a new growth. After the plant is established and no longer needs protection, stir in a little high grade fertilizer. This application made at first would have added very greatly to the plant's problems by giving too much heat and too great food supply. Now the plants—like a patient well past a fever—will take to nourishment and be able to stand it. Later, as growth becomes stronger and just before fruiting time, heavier applications can be made with visible results in the plant. This suggestion applies to all transplanting, but



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CHARLES E. RAYNAL

A Blue Bird Bedroom

(*Continued from page* 428)

been adopted. In wall papers, cretonne, etc., blue wrens, blue swallows, blue jays, blue sparrows, blue canaries and conventional blue birds are introduced. The fact is that the play has emphasized the bird idea and a color idea, leaving the fancy to play with them as it will in decorative art.

In the foregoing observations we have dealt somewhat fully with the subject of wall treatment, as this is the prime essential of interior decoration. Woodwork, draperies and other furnishings are developed harmoniously. The woodwork should be of white. The rug for the floor should be blue or blue and white. White enamel furniture is most appropriate, though a brass bed is not incorrect. If, however, the furniture one has on hand is of another color it is a simple matter to paint or enamel it one's self with any of the convenient preparations which come ready to hand. An old and perhaps discarded set of furniture may be made new and found precisely suited to the room. If one is disposed to venture on some artistic flights it is a good idea to paint or stencil upon the furniture an appropriate blue bird figure to strike a note of harmony with the walls.

The next problem is draperies. It is interesting to note that manufacturers of fabrics are equally awake to the impulses of popular taste. In fact draperies and wall papers go hand in hand; they are sister crafts. There is no difficulty in obtaining draperies with corresponding motifs. Good decorators are careful to consider wall papers and draperies together as practically one subject. Let us apply these principles to the room before us. If it is treated with plain side walls having figured frieze or crown, the latter suggests the window style. That is to say, the chief note of the window is the over-drapery and lambrequin of blue bird cretonne. Under this are simple white curtains. If, however, the entire side walls have an all-over design, the treatment of the windows is different. In this case the over-drapery is of plain material with applied designs either of cretonne or stencil in blue bird motifs. In this treatment the decorative idea is diminished in the windows to avoid tediousness, but it is not wholly abandoned. In some instances it is found preferable to dispense with the over-draperies and use scrim curtains with blue bird stenciling. This gives a light, simple, dainty and inexpensive result. One has to judge each case on its own merits. Taking the paper as a basis, one proceeds to work out the logical, artistic ensemble. It is difficult to lay down any hard-and-fast rule. but the illustrations show something of what has actually been accomplished.

Using the blue bird cretonne as a material, a number of simple accessories can easily be made: table-covers, scrap-bas-



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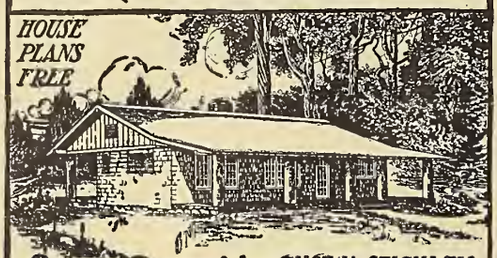
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kets, laundry-bags, pincushions, sofa-pillows, etc. The little screen completely fitted with sewing materials is a decided addition to the appearance as well as the usefulness of the room. Tufted cushions of the cretonne may be added for white or wicker furniture. Thus birds seem to be lighting everywhere. No treatment of the subject would be complete without considering also other unique blue bird accessories for the dresser and table. There are pin-trays, trinket holders, hair-receivers, hatpin holders, vases and rose bowls, all with blue bird motifs in Copenhagen effects. Some of these are pictured. Pretty as they are they are not costly, ranging in price from thirty-five cents up. If anyone is interested in the prices of the blue bird papers shown, they cost from forty-five to sixty cents a roll; the cretonnes cost from thirty-five to eighty-five cents per yard. The aim has been to confine ourselves to decorations which, though artistic, are inexpensive.

So it will be seen that this is a blue bird year. It may or may not be a fad. If it is one, it chances to be what is not always the case with fads, a lovely one.

The Seventeen Year Locust Appears

(Continued from page 431)

knowledge of the distance it will fall before it reaches the ground. On reaching the ground it at once enters it through a crack and begins its long period of development, out of the sight of man, only to come forth again at the end of seventeen years.

During this long period underground the larva sheds or moults its skin a number of times, and, attaching itself to the tender fibrils of plants, it derives its nourishment from these, with occasional shifting to other fibrils as the different ones cease giving forth the juices so needful to its development. As the Cicada underground takes such a long period for its development, there is little or no damage done to the trees or shrubs on whose roots it feeds.

There is a false notion abroad concerning the so-called sting of the Cicada, and every once in a while we hear that some person has been stung to death by these so-called locusts, but the fact is that there is nothing to fear from them; they can be handled and even mutilated without showing the slightest sign of resentment. Doubtless there have been rare cases where the flesh of a human being has been pierced by the needle filaments on the sucking-beak of the male, or by the ovipositor of the female, but as such cases are of doubtful record, there is absolutely nothing to fear from them in this respect.

Gen. Jacqueminot

THE rose is universally conceded to be the queen of flowers, and Gen. Jacqueminot may be justly regarded as the king of roses! At least it has been proven so in this rose garden by many rose-loving friends, for after wandering around and duly admiring all the varieties their steps

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invariably return to the jacqueminot, especially if they expect cuttings.

A rich, velvety crimson, very handsome in its brilliancy, fine buds, large, full roses, delightfully fragrant and well adapted to open ground culture.

It blooms in great profusion in June, and there is also considerable bloom during the later summer and fall. The writer has observed that for some reason some roses of this name are more free to bloom after June than others.

Gen. Jacqueminot is a Hybrid Perpetual, and among the hardiest of roses; so hardy that it persists in living almost without protection along the coast of Green Bay.

The picture accompanying this description was taken July 2d—hardly a June rose this year, owing to the unusual lateness of the season.

The bush stands five and one-half feet high; breadth of view, six and three-fourth feet; circumference at fullest part, twelve and one-half feet, giving us nearly two hundred roses.

We find the best results in protecting the rose by gradually and gently turning the bush on one side late in the fall, and holding it down with light boards and covering freely with straw, held from blowing off by light weights.

Rich, loamy soil, judicious culture and sufficient covering during the winter are rewarded by an abundance of bloom.

M. A. NICHOLS

Creating Outdoor Living Rooms

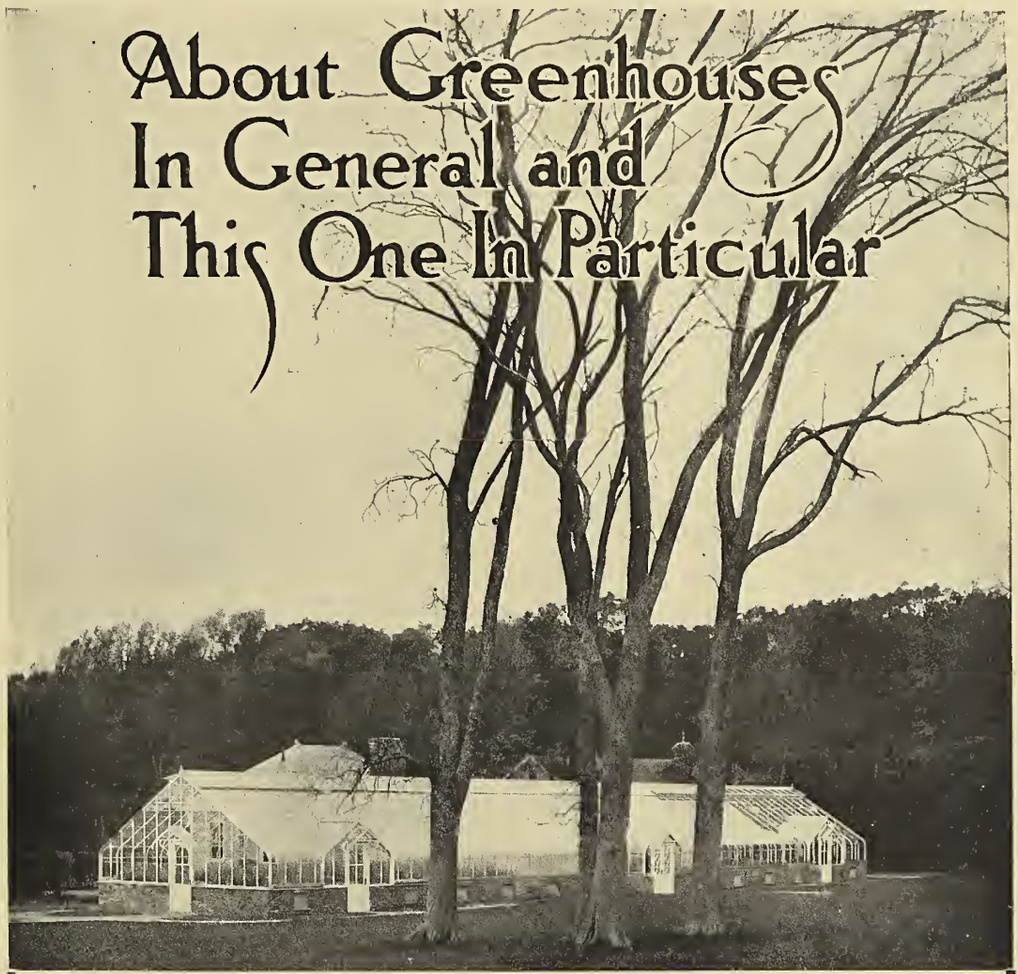
(*Continued from page* 434)

in either red and white or blue and white stripes, as picturesque as it is practical. The umbrella can be closed and stood in a corner when not in use, just as are the smaller ones of rainy day usefulness, but the iron table can spend the entire summer in the same spot on the lawn, as it is made entirely weatherproof by the paint.

A rustic summer-house of ample proportions that may be fitted up as an outdoor room for serving tea, for a sitting-room or for sleeping-quarters, can be bought in sections all ready to put together. If it has a floor, so much the better for its usefulness. The stationary seat built around three sides, with a rustic table in the center, constitutes its furnishings, which can be augmented by other chairs, or a cot and outside curtains if it is to be used as a sleeping-room. At any rate its possibilities for comfort are practically unlimited and it has an advantage over the furnished piazza, for it can stay in a secluded spot or be set up right in the midst of any outdoor festivities with equal facility.

Notes for Southern Gardens

MONTBRETIAS, better known by their pretty nickname of "Merry Breezes, are indispensable—even in a garden full of rarer plants. The blossoms, combined with plenty of the leaves, are very satisfactory in decorating. Out of blooming time, and when flowers generally are scarce, there are constant calls for





TO THE unthinking, one greenhouse is quite like another. It is simply a glass house where nature can be outwitted. Investigation, however, will reveal that there is quite as much difference in greenhouses as in automobiles; both as to endurance and ease of handling, as well as accomplishments.

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the graceful reeds. Flowers may come and go—but "breezes" are always available, summer or winter.

Decoration Day usually means one of the really hot days. Only a very few flowers—like Calla lilies—are suitable for cemetery use, at that time, as most blooms become limp and unsightly, exposed to the hot sun, long before the services begin. One woman, who grows Montbretias as an outside border for a long stretch of sidewalk, contributed the seeds in quantity. The dainty green decorations, with their perfect sun-resisting freshness, proved a most effective and refreshing substitute for half wilted flowers. The result will be an extensive planting of "breezes" in many gardens just for that one purpose. Montbretias may be cut to the ground occasionally—coming on again in a few weeks. They are very easily grown, a few bulbs soon showing strong clumps. And they do well in a wet place or a dry one—growing taller when freely watered.

Many new varieties are offered—supposed to be improved as to blooms, but I've seen nothing better than the original red and gold. In any, the real value is more in the plant than the blossom. E. S.

The Sewage Disposal Problem on the Insolated Country Plan

(Continued from page 435)

tion. This apparently impossible and almost inconceivable consummation of transforming a foul mass of closet sewage into water pure enough to drink, and better than much that is supplied to cities, is effected by a process of septic bacterial destruction performed in an air-tight and light-proof compartment. It is self-operating and extremely simple; so simple that it requires neither chemical nor mechanical assistance to produce the seeming miracle. Its self-generated bacterial action is comparable in chemistry to perpetual motion in physics. The process has been quite aptly likened to the battle of the Kilkenny cats that continued to fight among themselves until the last cat was dead—only the septic tank goes so far as to bury the cats.

Being lighter than water, the sewage from the closet rises to the surface on entering the septic tank, from which the fresh air and light, that would naturally neutralize or destroy the bacterial action, is completely excluded, and the development of bacterial life extremely rapid and multitudinous. These bacteria, preying upon one another, accomplish their own complete annihilation during a period of twenty-four hours.

As the solid matter is thus converted by condensation under the peculiar atmospherical conditions into a liquid form, it settles to the bottom of the tank and eventually passes into the weir box, and thence through the filter into tile outlets. This may lead into a stream, an open ditch or a convenient gutter, since the liquid as it issues from the weir box is ninety-eight per cent. pure water. The remaining two per cent. of impurities is removed as the

(Continued on page 468)

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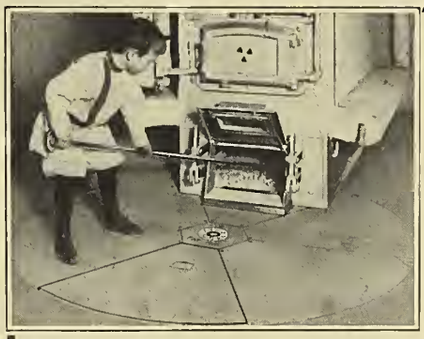
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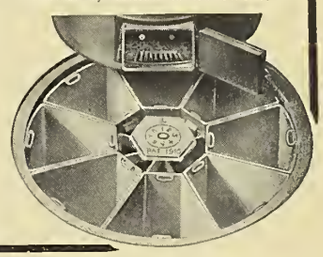
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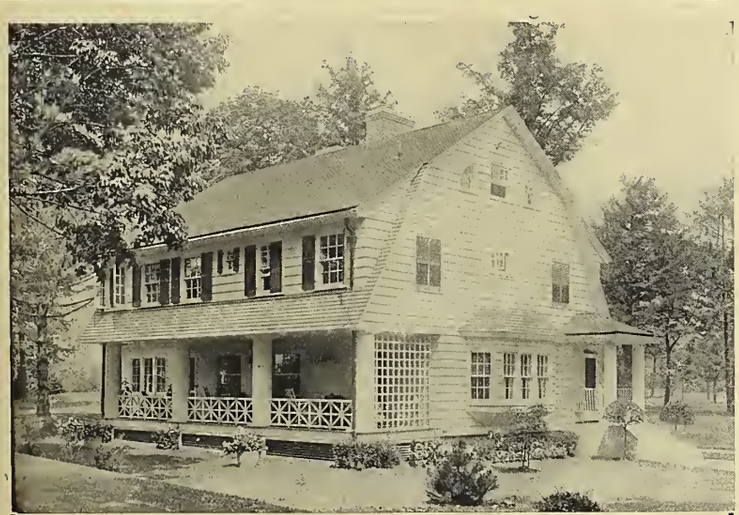
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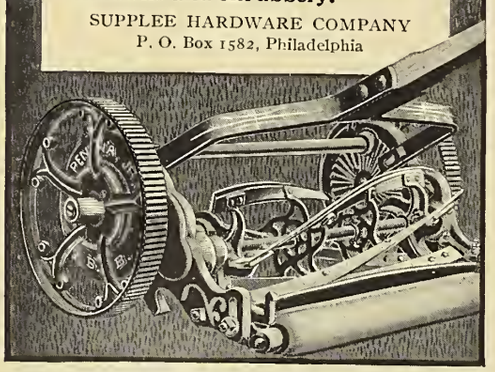
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(*Continued from page 466*)

water runs over the filter and comes in contact with the air, when it is as pure as crystal spring water.

Since simplicity of construction gives the most satisfactory results it is advisable to discard plans of the types of tank that depend on complicated mechanism for their operation and adopt one which is at once easy of construction, substantial, durable, self-acting and simple.

The type of septic tank here described is simplicity itself. When properly built it will take up its work with the first flush of the sewer and keep it up for generations without any care or attention. This tank may be built of stone, brick, concrete or wood covered with cement. One of the main essentials in proportion is that the receiving tank, or septic tank proper, should have a capacity sufficient to hold the accumulated product of the closets and sinks for a period of forty-eight hours, the tank being first filled with water to level of inlet. A tank, for instance, four feet deep, six feet wide and eight feet long, or containing approximately two hundred cubic feet, should be large enough, under ordinary conditions, to accommodate the wastes of a family of eight or ten persons. If the waste from the bath is included, additional space must be allowed for the increased flow, though diverting the bath and wash water will save expense in construction.

The weir box, which is mainly to prevent agitation of the water, and the filter tank may be in about the proportions indicated in the drawing. The filter tank is to be filled one-third its depth with very fine sand, above that an equal depth of sand, coarse gravel and fine charcoal, and the top third of depth with coarse charcoal mixed with small pebbles.

The outlet from sewage tank to weir box should be fitted with an elbow with tile reaching to within six inches of floor of sewage tank, and the same with the outlet from weir box to filter bed. The tile from closets to tank should be of vitrified tile large enough (six or eight inches) to avoid possibility of clogging. A trap joint is placed at location shown under the vent, to prevent sewer gas returning to house. The joints of sewer pipe are sealed with cement.

To guard against the possibility of some extraordinary condition arising that would make it necessary to enter the tank to clean it out or make repairs, a manhole should be let in at the top, as indicated, although tanks of this pattern have been in operation for years without requiring the least attention. Only one case is reported where such a tank needed cleaning, and that was where the refuse of a paper-mill, where much of the waste is rags, emptied into a large tank that requires cleaning once or twice a year.

The top of the tank may be covered with matched plank laid on joists. Where it is intended to cover the tank with earth, which is desirable, as it leaves no intima-

(*Continued on page 470*)



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Bungalows

By HENRY H. SAYLOR



¶ Here, at last, is the book of the bungalow—a book that will tell you precisely the things that you want to know in the planning and building of that summer home of yours. Not in all the history of this country has a type of building so firmly gripped the great body of the people as has this picturesque, informal, convenient and comparatively inexpensive type of one-story house. And yet, of the very few books devoted to it, is there a single one that has done the subject justice in a thoroughly practical, comprehensive and dignified way? If you are developing in your mind's eye a picture of that summer home you will one day build—on mountain, along the shore or in the woods,—this is the one book you cannot do without.

208 Pages; 203 Illustrations

¶ The book is most profusely illustrated and in the most helpful way. In addition to the floor plans the bungalows chosen are illustrated from photographs—there are no mere visionary schemes in the book at all. Every bungalow shown has actually been built and all are representative of the work of leading architects and amateur builders in various parts of the country. The bungalows illustrated—by exterior, interior and detail photographs, and by the plans—have been selected from hundreds of examples—selected so as to prove of the greatest value to the prospective builder.

All the interesting details of planning, building materials for the exterior and interior walls, foundations, roofs, fireplaces, water supply, sewage disposal, lighting; as well as the no less important matters of furniture and furnishing and the planting around the bungalow, are here clearly and entertainingly set forth. No matter what particular sort of summer or vacation home you want, you will find here all the guide-posts on the road leading to a successful building—successful not only in appearances, but in arrangement and construction as well.

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(*Continued from page* 468)

tion or suggestion of what is beneath, the joists should be heavy enough to sustain the added weight.

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(*Continued from page* 437)

qualities would place it high on the list, as an addition to any garden planted purposely for making a good appearance in the fall.

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Remodeling an Old Long Island Farmhouse

(*Continued from page* 439)

much of the work had to be done by hand, and all sorts of ingenuity employed to make inexpensive things serviceable and attractive. For instance, instead of using a thin stain for finishing stairway, wainscoting and some of the new furniture, a thick coat of paint of the desired color was applied and immediately wiped off. This filled the pores, protected the wood and gave a pleasing waxy finish. Another saving was made in filling irregular cracks and spaces in the flooring. These were made smooth and level by a home-made crack-filler, consisting of white lead, whiting, and the desired color, worked in and kneaded to a dough consistency. This too was much cheaper than the ready-made kind. In the big living-room the floor was painted a red tile color, and the crack-filler colored to match the red tile shade of the floor. Nor did its many uses end here, for this very same combination was used for leading the windows, the mixture being dull gray instead of red. The pane of glass to be leaded was laid over a design drawn on paper and the lines followed with

(*Continued on page* 472)

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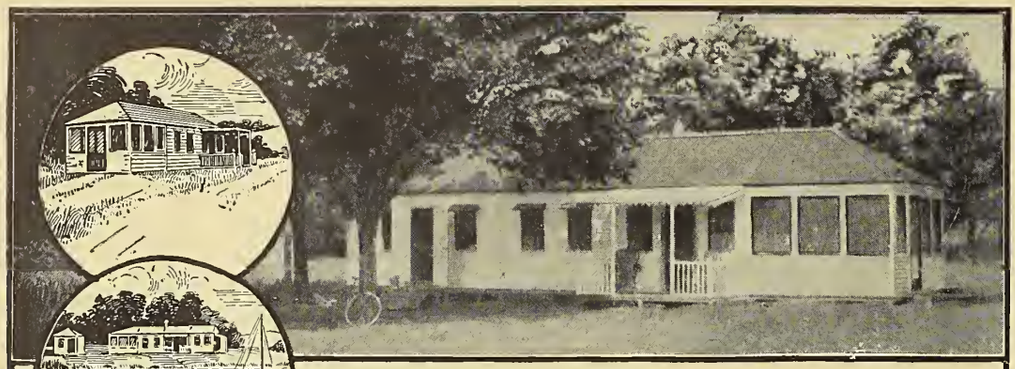
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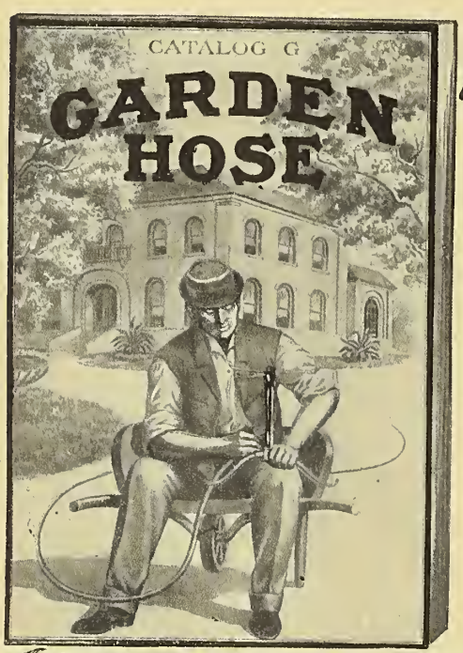
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A Copy Awaits Your Request.

(*Continued from page* 470)

this lead-colored putty. This has remained intact through winter storms.

Upstairs there are four bedrooms and a bath. The guest room has a dormer window with window-seat which lifts up, making a cupboard underneath. As there was no place in this room for a bureau or even a dressing-table, one had to be devised. A bureau would have blocked out a small side window, so the wall was pushed out over the stairs and a shrine-like recess serves the purpose of a dressing-table. A mirror hangs above, and little lockers take the place of drawers. These, with the window-settle and shelves under the sloping roof, give to a small room many places for stowing away things. The hall leads back into the addition—to bath and bedroom, and is lined with sheathing stained a gray-green. On one side a jointed door, held in place by a wooden button, makes it easy to get to the tank.

The comfortable bedroom in the addition has two little dormers, and one large end window, from which the ocean can be seen. There are two more bedrooms on this floor, one of which has a good-sized dormer window, so although the house is really a small one, it can accommodate a goodly company with utmost comfort—eight people, not including the servant!

Outdoors the three acres have for the most part been laid out in an orchard—apples and pears, and a few peaches, the vegetable garden, and a lawn on one side. This ends in a hidden garden. At present it is not on display, as it is only in the process of making, but there are always possibilities and there is joy in attempting to realize them. The ramshackle fence, which was falling to pieces and would have been expensive to patch and renew, is replaced by a privet hedge which thrives. This borders the hidden garden, with its two althea trees at the opening, which are being trained into an arch. Near by are two little weeping willows, and within the enclosure are hollyhocks, larkspur and phlox, reduplicating, perhaps, those that grew there long ago.

Two old cherry trees, outside of the hedge by the roadside, instead of being chopped down, are used as supports to a thriving wistaria, which has almost covered them. Beside the house a group of three poplars have been planted and throughout the grounds each bare spot is growing some tree, shrub, flower or grass to add beauty to the setting.

Behind the house is a small, well-built barn, used as a storehouse, and beyond is the chicken-house and yard. Between the house and barn is the kitchen garden, screened by a grape-vine from the road, and surrounded on the other sides by honeysuckle.

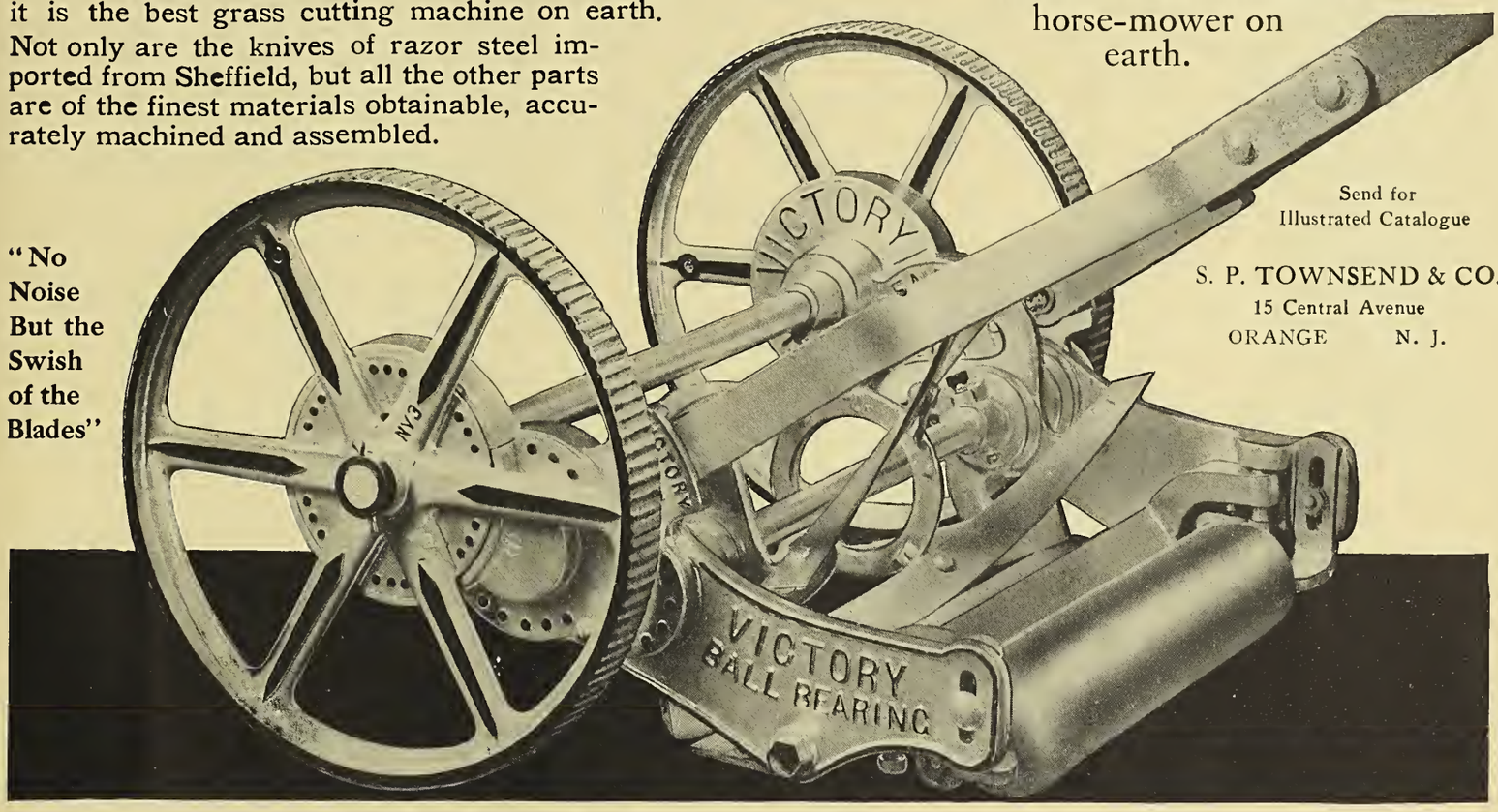
So, in six years, a little bare, unprepossessing house, in a barren, weed-tangled, treeless tract, has been converted into a cheerful, tasteful country home, surrounded by garden and orchard and shaded by all sorts of growing things

(*Continued on page* 474)

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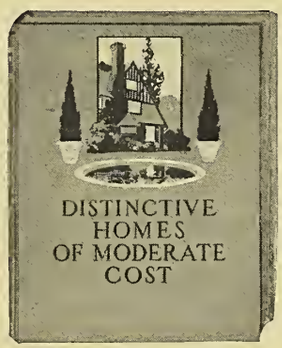


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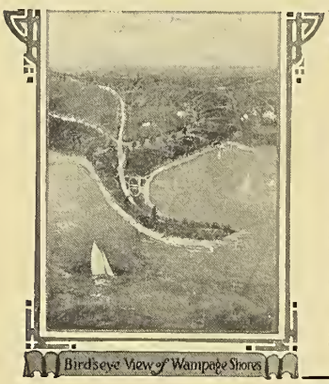
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(*Continued from page* 472)

which bring the bounty of flowers, fruits and fresh vegetables. All this has been accomplished with the smallest possible outlay of funds. The expenditure has always meant improvement. The young woman worker has had enjoyment and gratification in a country house, out of all proportion to the money, labor and time invested, for it is an expression of her own personality.

Summering the More Tender House Plants

(*Continued from page* 442)

uation; and as for cuttings, anything that will root in any situation and under any conditions will root here; it is only necessary to thrust the cutting up to the first joint or leaf bud in the sand between the pots and leave them, and in an astonishingly short time they will be found to have taken root and commenced growth.

Roses, especially, root readily here; begonias and gloxinias grow as if by magic, and if one forms the habit of sticking all the cuttings, stems of cut flowers of many kinds, and the like, into the sand, when fall comes there will be a fine lot of little plants waiting to be potted.

In arranging the plants in the sand-box care should be taken to place such sun-loving plants as the geraniums in the front or on that side of the box which receives the most sunshine. Shade-loving plants should be shielded from too great amount of sunshine by being placed in the rear of the box or behind taller plants. So, too, cuttings of shade-loving plants may be thrust in between the pots where they will be shielded from the sun; gloxinia leaves may be laid flat on the sand with the stem thrust under a pot and in this position will quickly form a callus and then a bulb, and by fall will be ready for potting; if kept growing during winter it will be large enough to bloom in the following summer.

The sand-box may be beautified with trailing vines, and vines may be planted in the rear of the box and trained on the wall to form a background. Choice greenhouse vines which one hesitates to commit to the ground may be grown here in perfect safety, providing there is sufficient sunshine. The passiflora, Southern Beauty, is a fine vine for this purpose as it is a very free bloomer and the blossoms are of great beauty.

The sand-box may be kept gay with the blossoms of the tuberous begonias, gloxinias, amaryllis and fancy-leaved caladiums if one wishes to devote it to this purpose, or it may be made to serve the double part of utility and beauty.

New Old Possibilities in Stucco Houses

(*Continued from page* 445)

terity of line, already referred to regarding concrete houses, again crops out. In its plasticity, however, lies a remedy for this repellent hardness, and it needs only some-

(*Continued on page* 476)



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FOR SHORE AND MOUNTAINS

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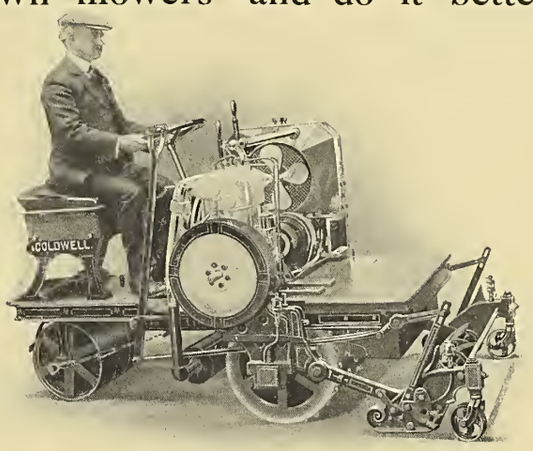


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¶ They will mow up 20 per cent grades. ¶ They leave no hoof-prints as horses do. ¶ They will roll the lawn smoothly. ¶ They do away with the expense of two men and three horses. ¶ They are of no expense when not in use. ¶ They are simple to operate and economical. ¶ They are a necessity on every large lawn

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"SIWELCLO"

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Makers of Silver Lake Solid-Braided Clothes Line



(Continued from page 474)

one with the courage of conviction to apply it. Examples and material are all ready to our hands. We need only study the parge work or pargetting so common in the sixteenth and seventeenth centuries in England.

When Henry VIII, not to be outdone as a royal builder by his rival Francis I, began to rear Nonesuch Palace, he brought from the Continent skilled workmen in stuccoduro, who covered the new edifice, both inside and out, with marvelous sculpture. This new fashion, introduced through pique, soon became immensely popular, and everywhere stucco ornamentation had great vogue. Native workmen soon adapted the new style to their own material—plaster of sand, lime and hair—and wrought designs that have lasted to our own day despite exposure to wind and weather. No one would deny that much of this work is gingerbready, but some of it is distinctly good and worth imitating. What the English workman did with his "parge" or plaster of sand, lime and hair, we can do quite as well, if not better, with our materials now. It only needs a pioneer to blaze the way and exploit the fashion. This has already been done to some extent in England. Few, probably, would wish to see our stucco houses covered with a profusion of relief ornamentation, but doubtless some modification and adaptation could be advantageously devised to relieve the extreme plainness of many of our stucco structures that ofttimes look as though their very eyebrows had been shaved off.

Another revival of an old process has also been attempted in several places in England—the scratching away of the upper coating of stucco so as to leave a design in the coat underneath. This "sgraffito" work was much practiced in Italy during the Renaissance. It, also, is one of the means of ornamentation within the reach of the modern stucco worker.

What will be the future of domestic concrete and stucco architecture none can certainly foretell. The practical claims to consideration, in the case of both materials, are too obvious to be gainsaid. We may look for the use of both to continue unabated. Modifications are bound to come and everyone engaging in concrete or stucco construction will bear a share, be it never so small, in hastening those modifications. Strict adherence to principles of constructional honesty and utility and, at the same time, due and ample regard for matters of esthetic import, will evolve styles that will answer our demands. In this period of reconstruction, where so many people are intimately concerned, it is worth while to weigh past experience and also to divest ourselves of some prejudices.

Distinction in Summer Hangings

(Continued from page 441)

chosen with due regard to its suitability. A Louis XVI room could not possibly have arras cloth used in it, while it would be

(Continued on page 478)

IF you are building or remodeling your house your work will progress much more satisfactorily and rapidly if you have expert advice upon the selection of wood finish for the trim and floors; also in deciding upon hardware, tiles, lighting fixtures, wall covering, drapery and furniture.

You can have for the asking the full service of Murphy Varnish Company's Department of Decoration which includes practical advice on all of these points.

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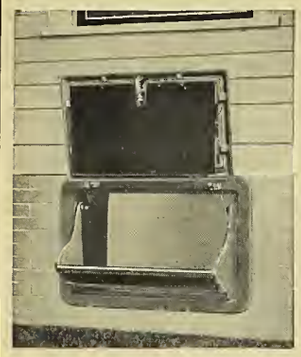
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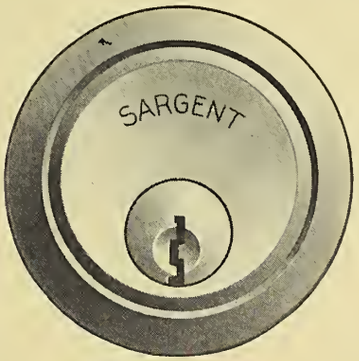
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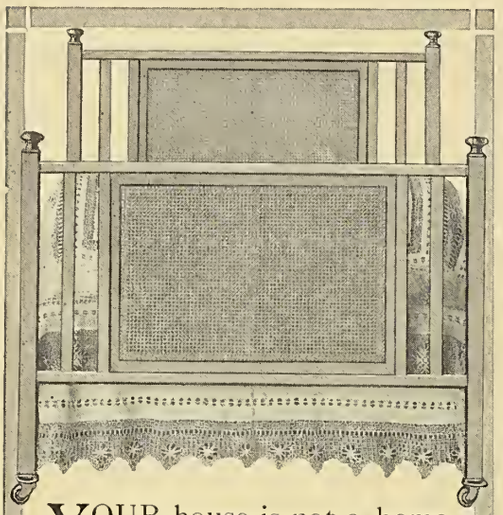
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(*Continued from page* 476)

charming and appropriate in a modern Mission room. Arras cloth with an appliqué design of linen couched on it makes beautiful curtains and portières to go with the Mission or Craftsman furniture that is popular for simple country houses. For Colonial or Georgian rooms that one sees so often, or with the simpler style of French furniture, there are beautiful chintzes and cretonnes and silks that harmonize perfectly.

There is an old farmhouse on Long Island that has been made over into a most delightful country house, and the furnishing throughout is consistent and charming. The curtains are reproductions of old designs in chintz and cretonne. The living-room, with its white panelling to the ceiling, its wide fireplace, old mahogany furniture, and curtains gay with parrots and flowers, hanging over cool white muslin, is a room to conjure with.

If the walls of a room are plain in color one may have either plain or figured hangings, but if the wall covering is figured it gives a feeling of unrest if the curtains are figured, too. Sometimes one sees bedrooms and small boudoirs where the walls and curtains show the same design, but it must be done with skill, or disaster is sure to follow.

If one has to live in the town house through the summer do not make the fatal mistake of taking down the curtains and living in bare discomfort during the hot season. If the curtains are too handsome to be kept up, buy a second set of inexpensive ones that can be washed without injury. It is better that they should stop the dust, and then go into the tub, than that one's lungs should collect it all. Curtains are useful as well as ornamental, and a house without them is as dreary as breakfast without coffee.

Old Glassware—American

IT is, of course, with our own product that the American collector has most to do, since old glass is rare in this country, and there are comparatvely few imported specimens to be had outside of the private collections which have been treasured and passed down the years as heirlooms. Of the glass to be found here, there are several very broad classifications: table ware, comprising goblets, wine-glasses, and decanters; flat ware, such as butter-plates, sauce dishes, and salt-holders; and lastly, flasks and bottles. With this third class collectors of purely American products have most to do.

While it is true that the American bottles are not so beautiful as the English, still they are quaint and interesting, and the average collector seems to treasure the home specimens as enthusiastically as the foreign ones. Many were manufactured to commemorate some event of national importance. Judging from the number of the commemorative pieces, we may infer that the glass-makers at that time were particularly enterprising. Certain it is that

(*Continued on page* 480)



Wilson's Outside Venetians

Blind and Awning Combined

For town and country houses. Very durable and artistic. Easily operated from inside Admit air: exclude sun rays.

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Wilson's Porch and Piazza Blinds

for porches and piazzas, exclude the sun, admit the breeze. Virtually make an outdoor room.

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Write for Catalogue "Venetian No. 3."

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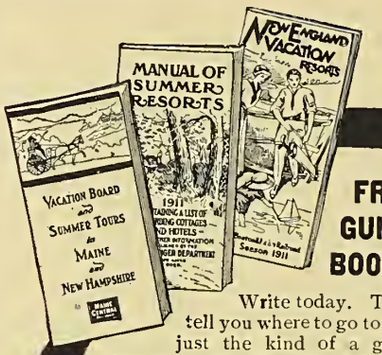
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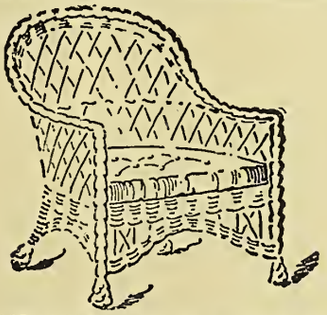
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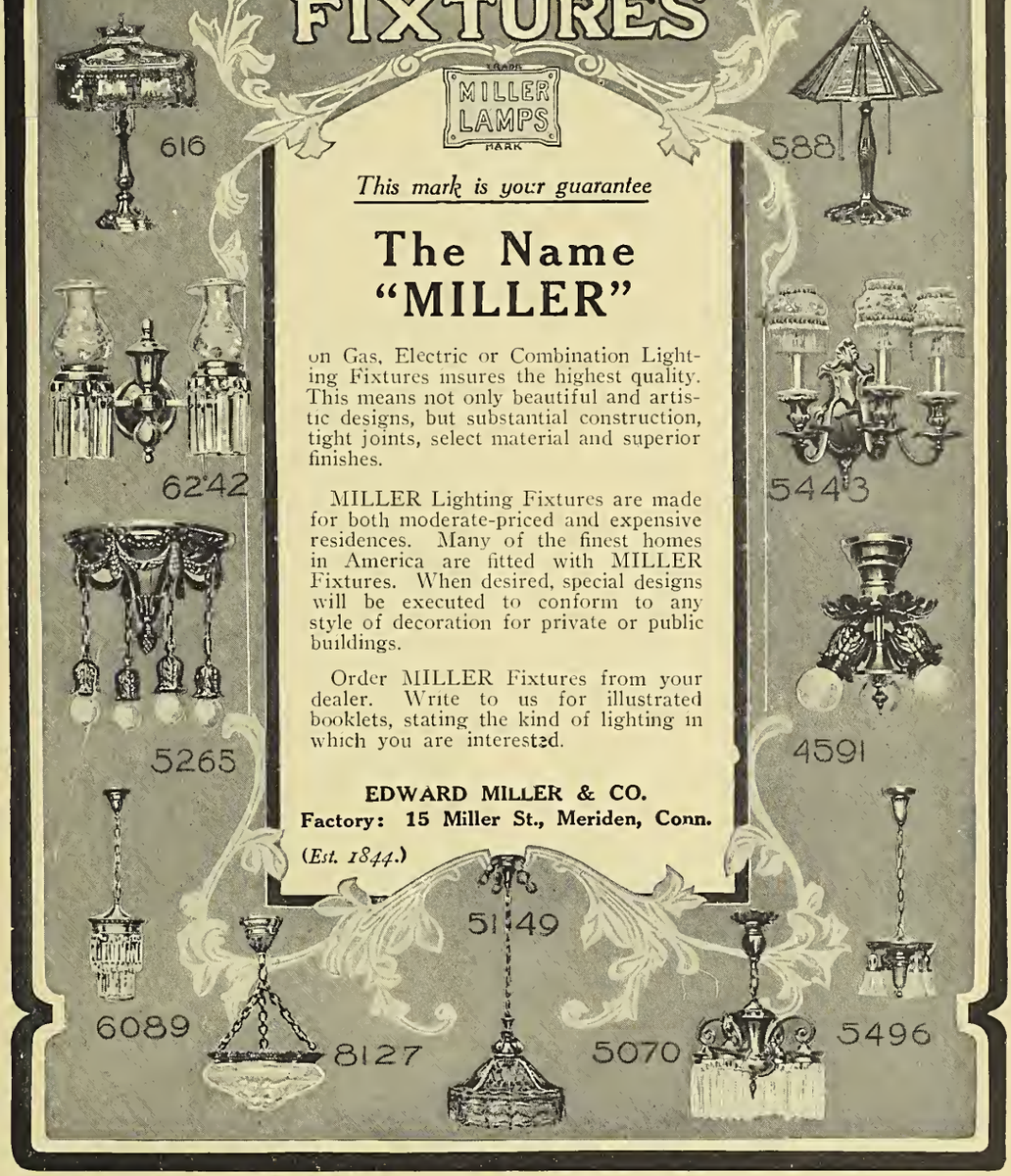
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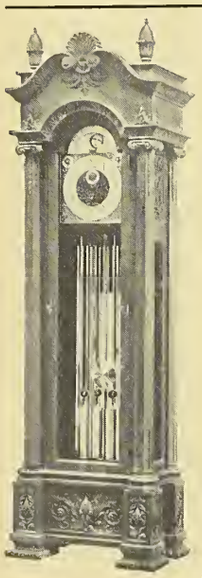


THEY include musical Garden ornaments, concealed lawn chimes, combined rose bush fountains with chimes with or without electric illumination. Smaller models for table decoration. These novelties are placed on the market this season for the first time. These chimes can be concealed by flowers or vines, and the least breath of air will produce the sweetest tones, coming apparently from a distance. We also have a full line of all kinds of garden furniture, vases, settees, fountains and all other garden beautifiers. Write for Catalogue.



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GRAND RAPIDS CLOCK & M. CO.
Grand Rapids, Mich.
Established in 1890

(*Continued from page* 478)

when Jenny Lind came to us in 1850 and 1851, and souvenirs which bore her name were eagerly sought, the "Jenny Lind" flask appeared. Its home was Glassboro, New Jersey.

In shape it was globular with long, slender neck, and the original design on one side of the bottle was a portrait of the famous singer, while the other side bore a view of the glassworks. Subsequently other firms adopted the shape and ornamented it with their own devices. It is an interesting bit of information that the original metallic mould of this flask was unearthed a few years ago at the works of the company who had made it.

Other designs produced at this period and later, were the Lafayette bottles, in commemoration of the visit to this country of that famous Frenchman, and the old



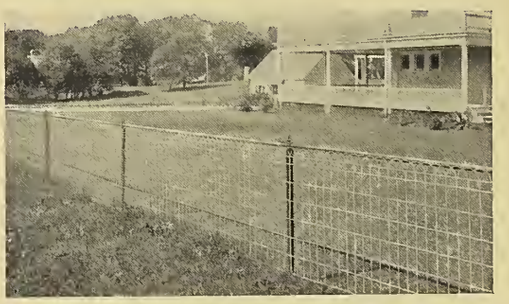
A rare old piece of American glassware with the cherry tree design

log cabin whiskey bottles, moulded in the shape of a house. Relics of the Harrison campaign in 1840 still exist in old flasks and inkstands shaped as bee-hives, log-cabins and cider barrels.

Between 1840 and 1850, Philadelphia was an important glass manufacturing centre, with the result that today in this country can be found good specimens, and many of the designs can be traced to their original source. Carefully stored on the cupboard shelves of the outlying farmhouses are many of these old flasks with designs peculiar, patriotic, political, and Masonic, now filled with elderberry wine, brandied cherries, molasses, or even boneset tea.

About eighty of these queer old flasks and bottles have thus far been discovered, of which about fifty have been identified. Of these, twenty-nine have representations of the American eagle; nineteen bear the head of Washington, and thirteen of Tay-

(*Continued on page* 482)



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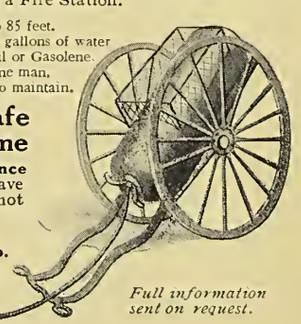


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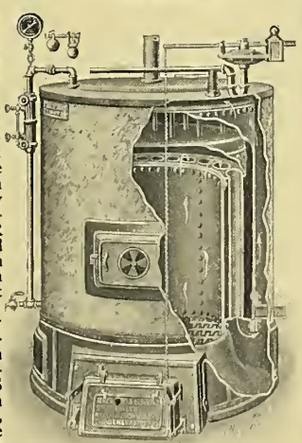
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A large variety of Ornamental Garden Vases in Marble, Stone and Pompeian Stone are on exhibition at our Studios. These vases add a touch of the ornate to the garden, and are very practicable for small flowering plants, palms, vines, etc.

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In writing to advertisers please mention HOUSE AND GARDEN.

(*Continued from page* 480)

lor. There are also many oddly shaped designs in the shape of fish, animals, men, violins, etc., but these are of uncertain date and origin, and therefore do not appeal to an enthusiast who desires chronological information in regard to his collection.

The oldest designs we have here in America could not have been made before 1825 and since most of them were produced between 1848 and 1852, we can be justifiably amused at the accounts frequently published, of remarkable discoveries of Taylor or Washington flasks imbedded in the foundations or stone walls of buildings erected more than a hundred years ago.

Perhaps most particularly to the collector of old glass considerable scope in price



A characteristic design on early American glassware; the "Father of His Country" bottle

is given. Much or little may be paid for the old bottles and decanters, although in the past twenty years, the price of old glassware has steadily risen. If Charles Lamb is right when he says that everyone should have a hobby, even if it is no more than collecting strings, what more worthy cause could enlist the collector than the assembling of this beautiful old glass whose history seems so interwoven with our country's? The quest for old glass seems to be one where quality, not quantity, counts.

MARY A. NORTHEND

Building the Summer Home

(*Continued from page* 420)

the stone secure, yet a stone wall that is a stone wall should stand up even if there were no mortar in it, and should not only be able to stand up, but should present this appearance of stability to the eye; it is this feature of the house at Cynwyd which is of particular strength.

(*Continued on page* 484)

THE HOUSE BEAUTIFUL



A "House Beautiful" illustration greatly reduced

"THE HOUSE BEAUTIFUL" is an illustrated monthly magazine, which gives you the ideas of experts on every feature of making the home, its appointments and surroundings beautiful.

It is invaluable for either mansion or cottage. It shows how taste will go farther than money. Its teachings have saved costly furnishings from being vulgar—on the other hand, thousands of inexpensive houses are exquisite examples of refined taste, as a result of its advice. It presents this information interestingly and in a plain, practical way. Everything is illustrated frequently in sepia and colors.

"The House Beautiful" is a magazine which no woman interested in the beauty of her home can afford to be without. It is full of suggestions for house building, house decorating and furnishing, and is equally valuable for people of large or small income.
ELLEN M. HENROTIN,
Ex. Pres. Nat. Federation of Women's Clubs.

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But to have you test its value, we will mail you FREE, "The House Beautiful" Portfolio of Interior Decoration and Furnishing with a five months' trial subscription. The Portfolio is a collection of color plates and others, picturing and describing rooms in which good taste rather than lavish outlay has produced charming effects.

Fill in the attached coupon—wrap a one dollar bill around it—mail to-day and the Portfolio will reach you by return post. "The House Beautiful" will then continue regularly for FIVE months.

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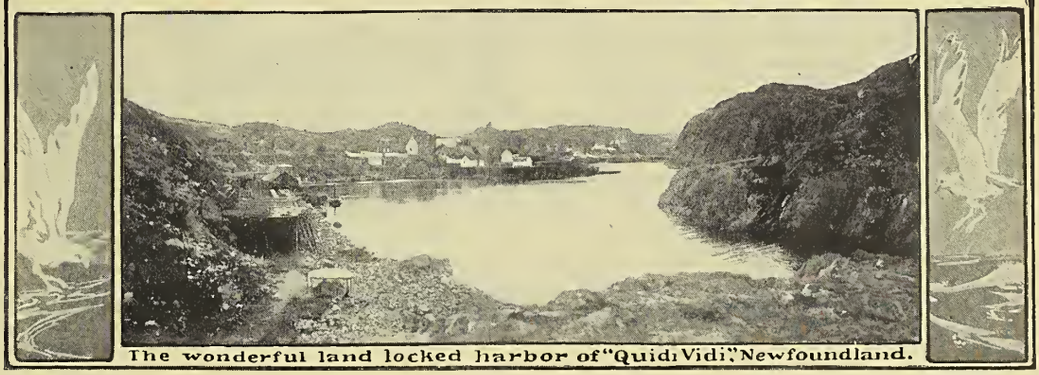
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This great tourist line to northern lands and seas, will this year operate the large, powerful steamships **"Stephano"** (new) and **"Florizel"** (the popular ship), giving the tourist seven days at sea and five days in port—2½ days in **Halifax** and 2½ days in **St. John's.** Sailings every Saturday during season.

Novelty, grandeur, delightful climate, and a *charming sea voyage* are combined with absolute comfort and remarkable economy in this cruise. *No hotel bills, changes or transfers, you live on the ship*—it is your home for the entire cruise. A foreign tour costing four times as much could not be more delightful. The ships are built especially for this cruise, are powerful, remarkably steady at sea and equipped with every modern device for safety and comfort.

We also offer tour via Black Diamond S. S. Line from Montreal, stopping at Quebec, through River and Gulf of St. Lawrence, stopping one day at Charlottetown, P. E. I., and Sydney, C. B., to St. John's. Return to New York via Red Cross Line (13 days), $65.50 up, including R. R. fare from New York to Montreal. Send for Illustrated Booklet No. 30

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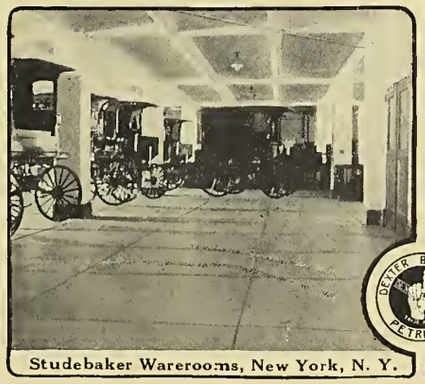


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Ornamental, deciduous, shade and weeping trees, Flowering shrubs, Barberry, Privet, Evergreens, Conifers, Hardy trailing vines, Climbers, Fruit trees, Berry bushes, Roses, Hardy garden plants, etc.

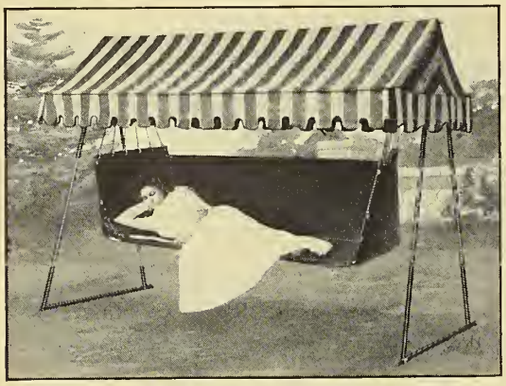
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with folding steel stand and adjustable awning

COOL—because you lie directly upon the duck bed—no mattress necessary.
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100,000 *Imported Dutch* BULBS FREE

This Free Offer to July 1, 1911

As an extra inducement to order your Bulbs early and to avoid being rushed later in the season, *we will give FREE* to the first 1000 people sending orders for $5.00 or more, **100 Beautiful Assorted Narcissus Bulbs,** suitable for naturalizing or bedding. These are all *hardy, Imported Dutch Bulbs*. This offer is good until July 1, only. Order early or you may be disappointed.

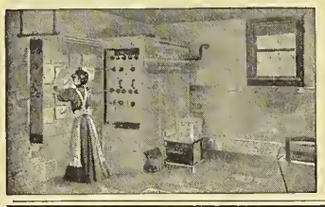
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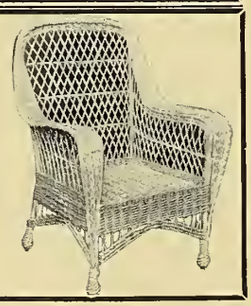
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To see "Willowcraft" furniture is to want it; to want it is to buy it; and to buy it is to secure a lifetime of artistic comfort and the feeling of satisfaction that alone comes from knowing you have the best. Nothing else like it.

Ask your dealer for "Willowcraft" furniture bearing the "Willowcraft" stamp. *None other genuine!*

If your dealer doesn't carry the genuine stamped "Willowcraft" send for names of Willowcraft dealers, illustrated catalogue and price list.

THE WILLOWCRAFT SHOPS
Box C - - North Cambridge, Mass.



(*Continued from page* 482)

The house for Dr. Hollister at Easthampton is a house designed for summer occupancy only, but built with a cellar and heated, it is intended for frequent use during the winters; winter week-end and Christmas parties at the seashore have quite lost their terrors for the city dwellers. The beautiful piazza on this house is arranged to be enclosed as a sun-parlor in colder weather, and what is in the summer-time open to every breeze that blows, in the winter becomes a sheltered spot in which one can be, to all intents and purposes, out-of-doors and yet with comfort.

The house at Pocantico Hills is one of the very large American summer homes, and from the standpoint of pure design one of the greatest. The main body of the house was built of rough stone, with half-timber used for the extensions, and the proportion between the half-timber and the stucco panels between is admirable indeed. The stonework has what we call texture; small variations in color and a play of light and shade over the entire surface. We no longer seek in our materials undeviating regularity of form, but rather seek to have them express their nature as unreservedly as possible, and this characteristic of modern work is here exceedingly well displayed. The house conveys a wonderful impression of power and strength, but it is associated also with the idea of comfort. The heavy stone walls mean cool interiors and the large windows of the first story provide plenty of light. Bold and simple, it is one of the highest achievements of the American architect.

While these houses were all intended primarily for summer occupancy most of them have been designed also for occasional or extended winter residence, and the period of summer occupancy itself is being extended every year. People are finding that the summer is no more delightful than the spring, and that autumn is the best of all; yet both in the spring and in the autumn heat is needed in this country, and the houses are not mere shacks, but homes. As has been said before, while the illustrations are mainly of large houses they all show houses whose quality is not a by-product of their size, but is as easily obtainable in the smallest as in the greatest.

The Bird Allies

THE pleasure which one feels in having a number of birds flying about the garden has of late been diminished by the raucous cries of the English sparrow. A certain effort is being made, however, to induce some of the attractive and useful birds to gather about the home. The Purple Martin yields very readily to any attentions that may be shown it. These birds, have a pleasant note and are beautiful to look at in their shining black plumage. They live in colonies, and to induce their visits bird houses must be built for them. The Secretary of the Audubon Society at Evanston, Ill., has been experimenting on a type of house to draw these birds, and has now made an attractive colony house which he find very satisfactory in making the birds his neighbors.

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the Economy JAR

No Leaky Rubber Ring.
No Glass top to leak in Air.
No Poisonous Zinc Cap.



Hand-in-jar Trade Mark

Because it has no leaky rubber ring to decay and admit the air—because it has no poisonous zinc cap—because it has no uneven and leaky glass top, but—instead it has a gold enameled cap, with tasteless, sanitary composition gasket which seals **Airtight** and as **no other jar has been sealed before.** White Crystal Glass—Wide Mouth—A child can seal and open it. It can be used 12 months in the year for canning every food in season. Keeps all vegetables, meats, fish, game, fruits, etc., sound—fresh—tasty—sweet and free from mould forever. Any food product may be put up in season and served at any time of the year as delicious as before canning. No other jar seals like it—opens like it—keeps like it. And best of all it keeps your food.

To advertise the airtight **Economy Jar** we will give **FREE** to Buyers of **Economy Jars,** King's Hall Silver, 1066, Sectional Plate Silver Teaspoons.

Three Teaspoons With every caery case of **Economy Jars.**

One Teaspoon with every dozen extra **Economy Caps.**

You want a half doz. or doz. of these spoons free

Cut out "Hand-in-Jar" trade mark like above shown, appearing on either end of each case of one doz. **Economy Jars** and mail it with 14c. U. S. stamps to cover cost of packing, postage, etc., and we will present to you one *full size* King's Hall Silver, 1066, famous sectional plate silver teaspoons, made by the manufacturers of the best silver plate in the world. The richest family in the land has no finer or more beautiful silver plate than King's Hall Silver, 1066. Wears for years and years. This is no "premium" spoon. On the contrary there is no finer silver plated ware made. And it is a most beautiful pattern. Warranted many years. A printed guarantee wrapped around each spoon. Nothing like it has ever been offered by any other manufacturer. You will be delighted. *King's Hall Silver, 1066,* sectional plate silver teaspoons are worth $4. a dozen or 35 cents a piece. Every case of jars has the trade mark on each end and also on carton of caps in each case. If two or three spoons are desired with each dozen of Economy Jars, cut out one trade mark for each spoon desired, and send them to us with 14 cents (for packing, mailing, etc.) with *each* trade mark you send. You may thus obtain three of these beautiful teaspoons for 42 cents with every dozen of Economy Jars. Value of the three teaspoons is $1.00. They cost you only 42 cents when you send Economy Jar trade marks. You save 56 cents every time you buy one dozen Economy Jars. Users of Economy Jars buying extra caps may cut out trade mark from carton of caps and send it to us with 14 cents in U. S. stamps to cover cost of packing, mailing, etc., and receive one of these 35 cent silver teaspoons free. Buy two dozen jars and get a complete set of six beautiful teaspoons. Get the jars now while this free offer is still in effect. Buy four dozen jars and get one dozen spoons. The spoons alone will be worth $4.00 of the cost.

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Half Actual Size



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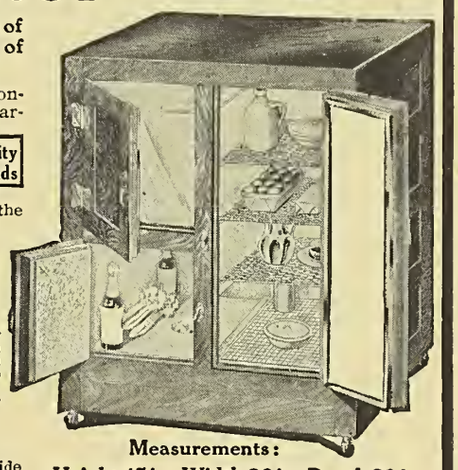
Opal-Glass-Lined Oak Refrigerator $31.75

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You get this highest grade Solid Oak Wickes New Constructed Refrigerator, *lined with Opal Glass,* "better than marble," for only $31.75—*freight prepaid from factory.*

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The Wickes
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is made of solid oak, to last a lifetime—perfectly joined and beautifully finished. The food compartment and door are lined throughout with OPAL GLASS, 7-16 inch thick. Our exclusive construction gives you *double* refrigeration from every pound of ice. Opal glass makes the WICKES absolutely sanitary.

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It shows you the famous Wickes Refrigerators of all sizes—inside and out. Guaranteed and sold by

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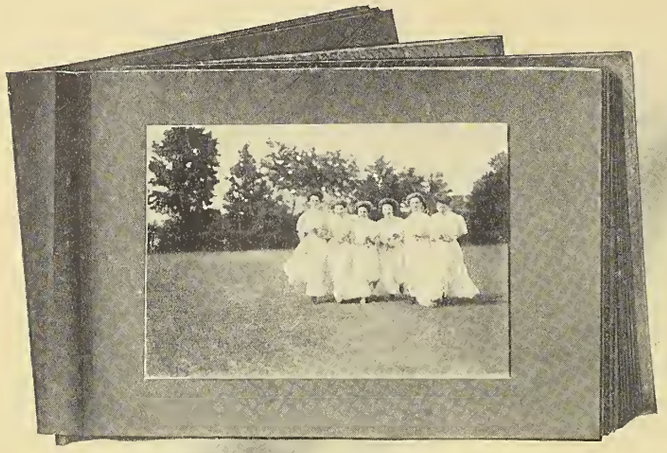
HICKS WILL MOVE TREES OF ANY SIZE
SUCCESS ASSURED

If you have a big tree that's too close to the house, don't destroy its beauty by haggling off the limbs—let us move it back for you. By the same token, don't you want some of your big trees moved nearer the house? Or isn't there an unattractive outlook you want shut off from view at once? One or two big trees or a group of small ones will do this quickly and effectually. If there are any trees in your own vicinity that will answer the purpose, we will move them for you or send trees direct from our nursery. Big ones—little ones—all sizes.

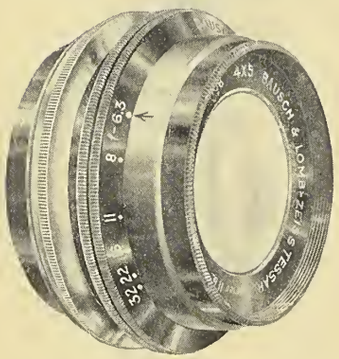
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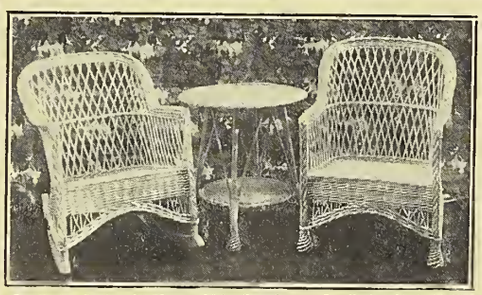
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